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# USSR REPORT

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## INTERNATIONAL ECONOMIC RELATIONS

### CEMA ACTIVITIES IN RECENT YEARS REVIEWED

Moscow MATERIAL'NO-TEKHNIЧЕСКОYE SNABZHENIYE in Russian No 3, 1979 pp 3-9

[Article: "Unique Experience in Cooperation with Equal Rights"]

[Text] Real socialism which has been established in countries of three continents appears before all mankind as a dynamically developing social system, the embodiment of freedom from exploitation and oppression, the full authority of people of labor, authentic democracy, the flourishing of culture and improvement in the well-being of the broad masses of people, and equality of all nations and nationalities.

For socialist countries recent years have been a period of steady ascent and constant advancement toward a developed socialist society, toward communism. Typical processes for them are internal political consolidation, rapid rates of development of public production, a rise in the material and cultural level of the workers, the flourishing of each nation and strengthening of State sovereignty.

The gigantic creative forces engendered by the new social structure are multiplied by cooperation and mutual assistance of sister nations. This is eloquently demonstrated by the activity of the CEMA--the first international multilateral economic organization to be based on principles of proletarian and socialist internationalism. This year the CEMA is 30 years old. The countries that constitute it are celebrating this anniversary as an important event in the life of socialist cooperation.

Having begun its activity as a European regional organization, the CEMA spread to the Asian and American continents when Mongolia joined it in 1962 and Cuba, in 1972. In 1978 socialist Vietnam became a full-fledged member. In addition to Yugoslavia, which since 1964 has had an agreement with the CEMA for cooperation in questions of mutual interest, and also Iraq, Mexico and Finland, which already maintain ties with the CEMA on the basis of the corresponding agreements, a number of states, above all developing ones, are studying the possibilities of establishing such ties. Contacts are being strengthened between the CEMA and the DPRK, Laos, Angola, Ethiopia and a number of international organizations.

The international authority of the CEMA is increasing as is its progressive influence on the democratization of the world system of economic relations in keeping with the requirements of time and the new alignment of world forces.

The cooperation of the CEMA countries depends on the same type of economic base which is created in each of them--public ownership of the means of production; on the same type of governmental structure--authority in the hands of the working class; and on the same ideology--Marxism-Leninism. These countries have a single goal--the construction of socialism and communism. All this provides a firm political and economic foundation for their friendly interstate relations.

With the creation of the CEMA one of the most successful and most effective forms of economic and scientific-technical interaction among the socialist countries was discovered. As Comrade L. I. Brezhnev emphasized, the CEMA gave the world a "unique" experience in the cooperation of a large group of countries with equal rights, the harmonious combination of their national and international interests, and the implementation in practice of the principles of socialist internationalism (L. I. Brezhnev, "Mir sotsializma--torzhestvo velikikh idey" [The World of Socialism--The Triumph of Great Ideas], Moscow, Politizdat, 1978, p 444).

During the 30 years of the existence of the CEMA the countries that comprise this organization have achieved outstanding successes in their social and economic growth. Each of them has achieved a high degree of development of productive forces, socialist production relations are becoming stronger in all ways, and the standard of living of the people is rapidly rising. At the present time the socialist cooperation is a powerful economic complex that has a large raw material base, a powerful scientific research potential and a developed modern economy. In terms of the rates of economic growth, it is the most dynamically developing region of the world.

Thus, the national income of the states included in the Council had increased 10-fold in 1978 as compared to 1948 and industrial production--17-fold. Occupying 19 percent of the territory and having 10 percent of the population, the CEMA countries produce approximately one-third of the industrial output in the world; they account for about half of the increase in industrial production; and their industrial might is greater than that of the United States and greater than that of all the states of Western Europe together.

The rates of growth of the national income in the sister countries in the past period have been three times higher and industrial production--four times higher than in the capitalist world.

The growth of the economic might of the CEMA countries depends on high rates of increase in capital investments. Their total volume had increased 10-fold in 1977 as compared to 1950. Most of the capital investments

were made in industry which made it possible to put immense production capacities into operation. Thus, during 1951-1977 capacities were created for producing more than 300 million kilowatts of electric power, for smelting about 110 million tons of steel and for producing more than 160 million tons of cement a year.

Under the influence of the scientific and technical revolution important structural advances have been made in the industry of the sister socialist countries. The proportion of machine building and metal processing, the chemical industry and the electric power production in the gross industrial output has increased significantly.

The development of socialist industry has made it possible to create and steadily strengthen the material and technical base of large-scale socialist agricultural production. During 1950-1978 its gross output in the CEMA countries increased 2.5-fold on the whole.

The scale of the creative activity of our peoples has increased colossally. This is clearly shown, for example, by the fact that in 1975 each percentage point of increase in industrial output in the CEMA countries made 10 times the difference it made in 1950. The increase in industrial output alone during the five-year period of 1970-1975 exceeded the entire volume of industrial production in 1950 five-fold (in absolute terms).

During the past 30 years the countries of the socialist cooperation have achieved outstanding successes in raising the level of living of the population, strengthening its material and social confidence and providing for harmonious physical and spiritual development of the individual, that is, in the final analysis, in improving the socialist way of life. The satisfaction of the constantly growing material and cultural needs of the people and the rise in the level of their life constitute the key task of the economic and social programs adopted by the latest congresses of the communist and workers' parties of the CEMA countries which are being successfully implemented.

As the successes of socialism multiply, such a historical pattern as the gradual rapprochement of socialist states is manifested increasingly clearly. The interrelations among them are becoming ever closer; elements of community are appearing more and more in their politics, economics and social life; and the levels of their development are gradually equalizing. For example, while at the time the CEMA was established the ratio between the highest and lowest level of per capita national income in the European CEMA countries was 3:1, now it is 1.5:1.

Now the majority of socialist countries are constructing a material and technical base for a developed socialist society. As collective experience shows, the most important feature of this process is the foregrounding of

intensive factors in economic growth and the increased attention paid to the qualitative aspect of development, to increasing the efficiency of all branches of the national economy on the basis of utilization of the achievements of the scientific and technical revolution, their organic combination with the advantages of the socialist system of management and improvement in organization and administration of production.

The formulation of these cardinal tasks by the ruling parties reflects the requirements of the objective process of further collectivization of production, whose development is now being raised to a new level. The higher degree of socialist collectivization is directly conditioned by the increased volume and concentration of production, the deepening of specialization, the developing division of labor and cooperation in labor. The new quality and structure of productive forces predetermines the need for the corresponding changes in the social organization of production and in the forms of economic relations.

A complex of measures implemented in the CEMA countries in the modern stage serves to promote further socialist collectivization of production. In particular, an important role is played by measures for increasing concentration on the basis of enlarging the basic economic unit and increasing comprehensiveness in solving technical and economic problems related to the development of production. New organizational forms are used for this: production and scientific production associations, inter-farm cooperation in agriculture and agro-industrial integration, and territorial industrial complexes.

The course toward increasing the efficiency of production and improving the management of the national economy has also required the corresponding intensification of mutual economic and scientific-technical cooperation among the CEMA countries, which is a most important factor in the successful economic development of these countries and the achievement of its social goals.

The process of concentration and specialization of production is being raised to an even higher level on the basis of coordinated and planned joint activity of the socialist countries, on the path to the development of various bilateral and also multilateral forms of their cooperation. Thus, in addition to interaction with processes of further collectivization of the planned economy in each of the sister countries, an international sphere and an international mechanism for it are also being formed. Here one sees manifest the tendency V. I. Lenin noted at one time "toward the creation of a unified world economy as a whole which is regulated by the proletariat of all nations in keeping with a general plan, a tendency which is quite clearly revealed even under capitalism and will undoubtedly be further developed and completed under socialism" (V. I. Lenin, "Polnoye sobraniye sochineniyy" [Collected Works], Vol 41, p 164).



Having created a system of intentionally directed, planned internationalization of production, the socialist countries are now assimilating a higher form of it in the modern stage--socialist integration. A special role here is played by the Comprehensive Program for Socialist Economic Integration which was developed jointly by the CEMA countries. The principal long-term goals that lie at its basis were determined in 1969 by the 23d special CEMA session which took place on the level of party leaders and heads of states of the sister countries.

Never before in the history of international economic relations has there been such an all-embracing form of international cooperation. The experience accumulated in the course of the implementation of the Comprehensive Program is of great significance. It shows that the cooperation of the socialist countries is being raised to a much higher level than simply the development of trade. It includes the assimilation of natural resources for the common good and the joint construction of large industrial complexes that are intended for the satisfaction of the needs of all of its participants. Cooperation among enterprises and whole branches of industry is being planned for many years in the future.

The integration of the CEMA countries serves as an important prerequisite for solving socioeconomic problems related to the creation and perfection of a developed socialist society, improved efficiency and quality of management, the equalization of the levels of economic development of these countries and the strengthening of their defense capabilities. The integration process contributes to the formation of a socialist way of life in the sister countries and the inculcation of a spirit of collectivism and socialist internationalism in their peoples. As was noted at the 25th CPSU Congress, on the path to socialist integration the power and solidarity of the cooperation of the countries of socialism are strengthened.

The peculiarities of the process of socialist integration of production are conditioned by the political and economic sovereignty of the sister states which are fully independent owners of the means of production on their territories. Relations among them are arranged and developed through voluntary coordination and on a contractual basis, with respect for state sovereignty, independence and national interests, nonintervention in internal affairs, full equal rights, mutual advantage and friendly mutual assistance.

During the years when the Comprehensive Program was being implemented the economic interaction of the socialist countries became deeper and the mutual augmentation of their economies increased, which produces no small advantage for each of the countries. The degree to which the national economic complexes of the CEMA countries augment one another is shown, for example, by their division of labor. In 1975 this provided for 62 percent of the import needs of the CEMA countries for machines and equipment,

65 percent of the need for consumer goods and from 60 to 99 percent of the need for ferrous and nonferrous metals, power lines and lumber.

Inherent in the policy of the CPSU and the Soviet State is an unwavering desire to strengthen the CEMA and to deepen the close economic cooperation with equal rights of the countries of socialism in the interests of each of them and the cooperation as a whole. By actively participating in international socialist division of labor the Soviet Union makes a large contribution to ensuring the dynamic and proportional development of the national economies of other socialist countries. Thus the fuel exports from the USSR to the CEMA countries amounted to 562 million tons (in conventional units) in 1971-1975, which is 76 percent more than under the preceding five-year plan. Such a large increase in these deliveries was no small matter and required that our country make capital investments in the amount of approximately 7.5 billion rubles.

The CEMA countries have accumulated rich experience in the area of specialization and cooperation in production and in scientific and technical cooperation. Through joint efforts they have created more than 1,600 new machines, mechanisms and instruments and more than 1,300 kinds of new materials, products and preparations. They have also developed and perfected more than 1,200 technological processes. For example, they have arranged joint production of modern electronic computers and many kinds of the latest machine tools and equipment. In machine building alone there are about 80 multilateral agreements in effect concerning specialization and cooperation in production. They include more than 8 000 items.

An impressive example of the effective interaction of the sister states is the joint work in space that was successfully conducted on board the Soviet space station in which citizens of Czechoslovakia, Poland and the GDR participated. These flights marked a stage in the extensive cooperation among the CEMA countries in the Interkosmos Program.

It is typical of modern industry to have an increase in material expenditures in production outlays and a steady rise in the capital-intensiveness of the extraction, transportation and processing of material resources. All this makes it necessary to combine the forces of the material and technical supply agencies of the CEMA countries for a comprehensive solution to problems of increasing the efficiency of the utilization of material resources and providing for a more active exchange of experience regarding economizing on them and utilizing them efficiently.

At its 1974 session of the CEMA (Sofia, 1974) adopted a resolution concerning the formation of a CEMA Committee for Cooperation in the Area of Material and Technical Supply. Its main task is to organize multilateral cooperation in questions of perfecting material and



technical supply, reducing the utilization of material resources, reducing the material-intensiveness of products and, on the basis of this, increasing the efficiency of public production in each CEMA country.

The cooperation of the sister countries in the area of material and technical supply is carried out in a number of directions. Among the most important of them one can name: efficient utilization of material resources, including secondary materials and industrial wastes; the organization of exchange among the countries of excess and unutilized products for industrial and technical purposes; the development of warehousing and the introduction of efficient new kinds of packaging; and improvement in the organization and administration of material and technical supply.

The cooperation actively promotes efficient and effective utilization of the scientific and technical potential and contributes to great savings in the national economy. Thus the joint development and output of technical means of mechanization of installation, lifting and transportation, loading and unloading, and warehouse work, according to existing predictions, will make it possible to raise the level of mechanization of labor in these operations to 93-95 percent by 1990 and to increase labor productivity 2.5-3-fold.

The implementation of the Comprehensive Program has made it possible not only to deepen coordination of national economic plans of the CEMA countries, which was begun as early as the five-year period of 1956-1960, but also to augment it with new forms of joint planning activity.

Life itself and the continuous complications and appearance of new tasks which are being resolved by the socialist states in the modern stage of their economic development also require a new approach, a search for better forms of cooperation. One of them is the development of the coordinated plan for multilateral integration measures among the CEMA countries in 1976-1980. An important feature of this plan which distinguishes it from all preceding documents of this kind is that, in keeping with domestic systems of planning and control, it envisions and has singled out in special sections the necessary material and financial means as an organic part of the plans for the development of the national economies. This is an overall plan. But it does not lose a single one of the features of the national plans of each of the states and in no way limits their independent economic activity.

For the 28 largest integration measures included in it, with an overall cost of more than 9 billion transferrable rubles, the degree of participation of one country or another in their implementation is determined as are the resources they are to allot for this. The coordinated plan includes measures for the construction of facilities

and additional capacities in fuel and raw material branches. Among these facilities are the Soyuz main gas line which has already been constructed (Orenburg--western border of the USSR) with a distance of 2,800 kilometers and the Vinnitsa- Zapadnoukrainskaya (USSR)-Al'bertisha (Hungary) electric power transmission line with the voltage of 750 kilovolts and a distance of 860 kilometers. Construction is proceeding at rapid rates on the extremely large pulp and paper combine in Ust'-Ilim and the Kiyembayevskiy asbestos mining-enriching combine. Planning and preparatory work has been started with the goal of combining the efforts of sister countries in creating new capacities for producing products that contain nickel and cobalt in Cuba and rendering extensive assistance to Mongolia in further accelerating her national economic development.

The coordinated strategy for improving the economic ties among the CEMA countries for the forthcoming 10-year period is determined by the development and implementation of long-term target programs for cooperation. Since they amount to the development and concretization of the Comprehensive Program, they are directed toward using combined efforts to provide in the long-range future for their growing needs for power, fuel and the main kinds of raw material, to satisfy the demand for foodstuffs and industrial goods more fully, to raise the level of machine building, and to accelerate the development of transportation. This is the first time in the practice of the CEMA that economic and social tasks of such great significance have been set and their implementation will exert an influence on the formation of the entire subsequent economic policy of the sister countries.

Thus the main thing in improving international socialist division of labor in the modern stage is to change over to the development of economic ties on a long-term basis and to determine the leading areas of cooperation in production for many years ahead. Drawing attention to these issues, Comrade L. I. Brezhnev emphasizes the persistent need "to increase the effectiveness of our ties as much as possible and to take into account the needs not only of the given moment, but also of the long-range future."

The 32nd CEMA session (1978) approved three of the five earmarked long-term target programs--in the area of power, fuel and raw materials; agriculture and the food industry; and machine building. "They concretize and develop the Comprehensive Program for Socialist Economic Integration," said Comrade A. N. Kosygin at the CEMA session, "and raise our cooperation to a higher level while strengthening its planning basis and create favorable prerequisites for optimization and increased effectiveness of public production as well as for increased capacities of the socialist market and stable growth of reciprocal deliveries of products, above all, machines and equipment."

The Politbureau of the CPSU Central Committee and the USSR Council of Ministers have instructed authoritative Soviet agencies to develop and implement measures for full and prompt fulfillment of the USSR commitments that arise from the decisions of the 32nd CEMA session.

In the forthcoming 33d CEMA session which will take place in Moscow this year they will adopt long-term target programs in the area of the production of consumer goods and transportation.

Long-term target programs create a good basis for transforming the next decade into a period of intensive industrial cooperation among the CEMA countries. They outline the broad contours for solving problems and help to formulate the economic policy correctly. Collective efforts will have to be used to determine the material and financial resources necessary for their implementation.

In this responsible work it is especially important to combine the efforts of the material and technical supply agencies of the sister countries. After all, one of the main directions for a successful implementation of long-term target programs in cooperation is economizing on fuel, raw materials, and process materials and reducing the material-intensiveness of production. The CEMA Committee for Cooperation in the Area of Material and Technical Supply has developed a complex of measures and recommendations for efficient and economical utilization of material resources. It contains a system of measures for reducing the material-intensiveness of products through extensive use of progressive materials, light reinforced structures and wastefree technology, improvement in the structure of material consumption, putting secondary resources into circulation, and so forth. On the basis of this and also on the basis of the materials and proposals of permanent CEMA commissions and branch divisions of the Council, proposals have been prepared for drafts of long-term target programs for cooperation in efficient and economical utilization of material resources.

A most important issue is now on the agenda of the CEMA Committee for Cooperation in the Area of Material and Technical Supply: The development of the main directions for economic and scientific-technical cooperation in the matter of material and technical supply in 1981-1985.

It is very important for the development of the economies of the countries of the socialist cooperation to draw up future bilateral plans for specialization and cooperation in production in close coordination with long-term target programs within the framework of the CEMA. Thus the strategy includes not only multilateral, but also bilateral long-term cooperation. At the friendly meetings between General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet, Comrade L. I. Brezhnev and party leaders of the sister countries

in the Crimea, they determined the need for the development of bilateral programs for specialization and cooperation in production for 1981-1990. These programs are already being created.

Within the framework of multilateral and bilateral long-term programs, a system of large agreements for cooperation is being prepared. The party emphasizes that this work requires special attention from the corresponding Soviet planning and economic agencies. It is important to complete it more rapidly in order to maximally take into account the agreements that have been reached during the course of the current coordination of national economic plans and the compilation of the Coordinated Plan for Multilateral Integration Measures for 1981-1985.

The ministries and departments that are directly participating in the cooperation with the CEMA countries must take additional measures for prompt and high-quality fulfillment of specific commitments that ensue from the agreements for economic and scientific-technical cooperation, particularly export commitments. This will correspond to the requirements of the 25th CPSU Congress for strict and precise fulfillment of measures that have been collectively earmarked by the sister countries--the duties of the USSR Gosplan, the ministries, departments, associations, enterprises and all who are involved in this part of the work.

The Soviet people's deep understanding of their international duty is clearly demonstrated by the initiative of the collective of the AvtoVAZ association in honor of the 30th anniversary of the CEMA. An important constituent part of the socialist commitments of the Volga Automotive Plant for 1979 was concern for prompt and high-quality fulfillment of export orders of the sister states and for the development and deepening of ties with enterprises of these countries. The challenge of the automotive builders to mark the 30th anniversary of the CEMA with new successes in economic integration found broad response in our country and in other socialist countries.

It is characteristic of communists to soberly evaluate the state of affairs and not to close their eyes to unsolved problems. There are such problems, difficulties and shortcomings in the development of the national economies of the countries of the socialist accord and also in their mutual cooperation. A large part of them predictably arise as we advance, increasing our economic potential and raising the technical level of industry since a developed, complex economy advances more complex problems. But problems of another kind also arise and they reflect shortcomings in our work or objective difficulties arising because of various factors, including external ones.

At the time of his visit to Czechoslovakia in May and June of 1978, Comrade L. I. Brezhnev pointed out, particularly, that in terms of a number of indicators the sister countries are still not creating standards. This pertains to several areas in the development of electronics, machine building and the chemical industry. "Can we take a leading position in these branches as well? Undoubtedly," said Comrade L. I. Brezhnev. "And the sooner we do it the more skillfully we will improve international division of labor and the closer our economic interaction will be."

We have everything necessary to successfully solve the most difficult economic, technical and social problems, relying on the production and scientific-technical potential that has been created in the countries of the socialist accord and utilizing the advantages of mutual cooperation. This has been confirmed by all of our development and has been clearly embodied in the remarkable achievements of the peoples of the sister countries and in the strengthening of their union and friendship on the basis of principles of Marxism-Leninism and internationalist solidarity.

The sister parties are doing an immense amount of work directed toward more closely combining the efforts of the countries of the socialist accord and making their cooperation a more effective means of implementing plans for socialist and communist construction. This is precisely the orientation of the results of the meetings of General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet, Comrade L. I. Brezhnev and leaders of sister parties that were held in July and August 1978 in the Crimea. The Politbureau of the CPSU Central Committee, having considered the results of these meetings, emphasized that the implementation of the creative plans earmarked by the congresses of communist and workers' parties of the sister countries is accompanied by the expansion of ties among socialist states in all of the most important areas of public life--politics, economics, and ideology. The agreements that were reached in the Crimea give a new impetus to the coordination of activities in the near and distant future. In particular, they will contribute to planning the forthcoming five-year periods for the countries of the socialist accord and making sure that they proceed in the direction of further ever deepening cooperation and specialization of production in the interest of more effective development of the economies of each of these countries and further strengthening of the world system of socialism as a whole.

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## INTERNATIONAL ECONOMIC RELATIONS

### CEMA ACTIVITIES AND ACCOMPLISHMENTS REVIEWED

Kiev PRAVDA UKRAINY in Russian 12 May 79 p 3

[Article by CEMA Secretariat adviser G. Gorelov and PRAVDA UKRAINY correspondent B. Pakhomov: "Bright Facets of Collaboration"]

[Text] The Council for Mutual Economic Aid was created 30 years ago. Today CEMA numbers ten socialist countries in Europe, Asia and Latin America. The states included in the Council produce one third of the world's industrial output. CEMA at the present time consists of gigantic construction projects in the Soviet Union, Mongolia, Cuba and other fraternal countries. There are atomic electric power plants, joint power engineering systems and petroleum and gas pipelines that are unprecedented in their length and capacity. This represents the work of hundreds of scientific institutes and many thousands of scientists, designers and planners. It is the work of millions and millions of citizens of the new world, all engaged in setting a bright example for all mankind.

Workers in the Socialist Bloc countries are celebrating the 30th anniversary of the Council for Mutual Economic Aid as an important event. The competition launched by the collective at the Volga Association for the Production of Small Automobiles [AvtoVAZ] under the slogan "The Orders of Friends -- On Schedule and With a High Degree of Quality," is becoming more extensive in scope. Our great socialist country is preparing for this glorious jubilee in a business-like and creative manner.

The Editorial Board of PRAVDA UKRAINY, with the amiable assistance of CEMA Secretary N.V. Faddeyev and workers from the CEMA Secretariat, has just organized reporting from the CEMA Headquarters in Moscow. This reporting will acquaint the reader with individual aspects of the diverse work of the Council, all directed towards improving the economic might of the world socialist system and the material welfare of workers in all of the Socialist Bloc countries.

When one travels to the CEMA building from the center of Moscow, it is not too long before the vehicle moves out onto the spacious Avenue Imeni Kalinin -- a new thoroughfare lined with tall buildings in the capital of the country of Soviets. And as a symbol of future aspirations, at the end of this thoroughfare, facing the Moscow River, towers the huge 30-story headquarters building of the Council for Mutual Economic Aid. The glass of its broad windows sparkle in the rays of the sun resembling the facets of a precious stone.

The spacious halls of the ground-floor level, the strict business-like rooms used for meetings and conferences and the roomy high-speed elevators produced in Prague. Various languages are overheard. Here one quickly becomes aware of the true meaning of such concepts as "socialist integration," "international division of labor" and fraternal collaboration. It is here that a collective representing many nations is at work, representatives of all of the CEMA member states -- Bulgaria, Hungary, Vietnam, the GDR, Cuba, Mongolia, Poland, Rumania, the Soviet Union and Czechoslovakia. It is precisely these workers of the Secretariat, representatives of the CEMA member states, who are working shoulder to shoulder, performing important work, implementing realistic plans, projects and agreements and displaying a firm desire on the part of the fraternal states and people to strengthen friendship and expand collaboration.

#### G. Ranshburg: It Is a Basically New Inter-state Organization

"The most typical feature of relationships among the CEMA member states is the principle of comradely mutual assistance," stated Gabor Ranshburg, a Hungarian and Legal Department adviser for CEMA, during a discussion with us. "It is by no means an accident that this principle is reflected in its title. The Council for Mutual Economic Aid is an international organization of the new type. Its social essence is basically new. The specific features of the inter-state organization of the socialist world are included in the CEMA Regulations, which possess not only legal but also tremendous social-political importance.

The Regulations proclaim the goal of uniting and coordinating the efforts of the CEMA member states in the interest of further strengthening and improving collaboration and the development of socialist economic integration, the planned development of the national economy, accelerated economic and technical progress in these countries, a raised level of industrialization in those countries in which industry is less developed, constant growth in labor productivity, a gradual drawing together and levelling off of the levels of economic development and consistent improvements in the welfare of the people in the CEMA member states. It is emphasized in the Regulations that CEMA is predicated upon the principles of sovereign equality for all member states of the Council. In particular, this means that regardless of economic potential, population size or payments into the CEMA budget, each country has one vote in each one of the CEMA organs.

In accordance with the Regulations, the highest CEMA organ is a session of the Council consisting of delegations from all of the member states; this session convenes no less often than once annually. The first (organizational) session of CEMA, which defined the principal trends for its activities, took place in Moscow on 26-30 April 1949.

The main executive organ of CEMA is the Executive Committee at the level of deputy heads of governments, it convenes quarterly. The CEMA committees are concerned with solving the more important problems of collaboration in the economic, scientific and engineering spheres, whereas the permanent committees are concerned with organizing collaboration in the individual branches. The Secretariat performs a great amount of organizational work.

Improvements are continuing in the legal principles of collaboration among the member states of the Council. A great amount of attention is being given to developing general legal norms in the sphere of coordination of national economic plans, production specialization and cooperation, scientific-technical studies and currency-financial problems. This work is extensive and laborious and it requires a thorough study of the national-legal norms and the development of identical concepts and an identical understanding of the legal terms, so as to make it possible for all of the members of our society, figuratively speaking, to speak in the same language. The recently developed terminology dictionary for the most important legal concepts used in the Council's documents must serve this same goal. It should be emphasized that the tasks of improving the legal principles of CEMA are clearly set forth in the complex program.

Complex program -- these two words are often heard being mentioned by the CEMA Secretariat workers. In the interest of brevity, they refer to the complex program for further strengthening and improving collaboration and the development of socialist economic integration among the CEMA member states. We asked an individual who participated directly in the development of this program -- Igor' Sergeyevich Ikonnikov, an adviser in the Department of Summary Economic Works -- to acquaint us with the importance of and degree to which this important program is being carried out.

### I.S. Ikonnikov: Implementation of the Complex Program

"First of all, it should be emphasized that the complex program is predicated upon the scientific statutes of Marxism-Leninism and upon the principles of socialist internationalism, solidarity and fraternal mutual assistance. It reflects the rich experience of the diverse types of collaboration practiced among CEMA member states. Its principal trends were defined by the leaders of the communist and workers' parties and by the heads of government of the fraternal countries during the 23d Session of the Council in 1969 and it was adopted during the 25th Session in 1971. This document was the result of collective creativity by the representatives of all of the CEMA member states -- party and state figures, eminent



scientists and specialists. The program is based upon a complex approach for solving the problems of collaboration and it embraces the spheres of material production, science and engineering, foreign trade and currency-financial relationships.

Let us now examine exactly what has been accomplished since the time (almost 8 years ago) that the complex program was first adopted.

It should be mentioned that a number of important measures are being carried out on a collective basis in the sphere of material production. On the basis of joint efforts, new installations are being erected on the territory of the USSR: Ust'-Il'mskiy Cellulose Plant, Kiyembayevskiy Asbestos Mining-Enrichment Combine and new capabilities for the production of iron-containing raw materials and ferrous alloys at the Kurak magnetic anomaly and Krivoy Rog deposits. In addition, capabilities for the production of nickel and cobalt containing products have been developed in the Republic of Cuba. Work has been completed on the construction of the Soyuz gas pipeline (Orenburg - western border of the USSR) and on the 750 kilovolt electric power transmission line from Vinnitsa (USSR) to Al'bertirsha (Hungarian People's Republic).

Measures associated with the complex program are being carried out successfully in the sphere of scientific-technical collaboration, with more than 3,000 scientific-research and planning-design organizations and also higher educational institutes of the CEMA member states participating in this work today. During the 1971-1976 period alone, by means of joint efforts, more than 1,500 new machines, mechanisms and instruments were created, in excess of 1,300 new materials and preparations were developed and improvements were carried out in more than 1,200 technological processes.

More extensive use is being made in the national economies of a number of fraternal countries of the results of joint space studies. The flights by international crews aboard the Soyuz and Saliut space ships and joint experiments carried out by astronauts, scientists and specialists of the USSR, Czechoslovak Socialist Republic, Polish People's Republic, the GDR, People's Republic of Bulgaria and other CEMA member states serve as fine examples of the effectiveness of combined efforts in this field.

The complex program was further defined and developed as a result of the long-term and special-purpose programs for collaboration (DTsPS), adopted during the 32d Session of the Council in 1978. The principal goal of the measures included in these programs consists of satisfying, for a considerable period into the future, the increasing requirements of our countries for the principal types of energy, fuel, raw materials, food products, producer goods and advanced technology and to promote further improvements in the material and cultural standard of living of people in the Bloc countries. The CEMA organs are continuing their work of preparing DTsPS [dolgosrochnaya televaya programma sotrudnichestva; long-term special-purpose program for collaboration] in the interest of satisfying the rational requirements of

the CEMA member states for industrial consumer goods and also for the development of transport communications.

The implementation of measures called for in the long-term special-purpose programs represents the principal thrust for collaboration and the development of economic integration among the CEMA member states during the next 10-15 years. DTsPS represents a new stage in strengthening the planning principles for economic contacts among the fraternal countries and for levelling off the levels of their economic development.

This was precisely the subject of a discussion we held with two Secretariat workers -- Mongolian Daminglyn Zhigmid and a Pole by the name of Auksenitsiyush Kotsira -- the effects of the complex program, the long-term special-purpose programs and coordination of the five-year plans on the economic development of individual CEMA member states.

#### D. Zhigmid: The Levelling Off of the Level of Development in Actual Practice

The Mongolian People's Republic entered CEMA in 1962 and since that time it has participated actively in the work of all of its organs. The experience of past years has clearly revealed that the carrying out of the complex program is successfully promoting an acceleration in the economic growth of the MPR (Mongolian People's Republic). The traditional collaboration between the MPR and USSR is developing and becoming enriched by new forms in complete conformity with the goals and principles of the program. With the assistance of the USSR, many important projects of a production and housing and cultural nature have been erected and introduced into operations. This includes the Darkhanskiy House building Combine, a number of irrigation systems and large-scale mechanized dairy farms.

At the end of last year, one of the world's largest and in fact the largest mining-entrainment enterprise in Asia -- the Erdenet Combine, erected with the assistance of the Soviet Union -- was placed in operation (the first phase). A number of enterprises and farms are being modernized and expanded with the technical-economic assistance of the NRB, VNR, GDR, PNA, SKR and the USSR. An international geological expedition in which all of the CEMA member states are participating is operating on the territory of the Mongolian People's Republic.

The problem of training technical and scientific personnel is being solved successfully. The Soviet specialists and workers are making their experience available to their Mongolian colleagues. Many of our students are studying at VUZ's in the USSR and in other socialist countries. One does not have to travel too far to find an example. My son has completed his studies in the Department of International Relations at Kiev University and is presently working for Gosbank for the Mongolian People's Republic.

In discussing the development of the Mongolian national economy, mention must necessarily be made of the role played by MIB (Mezhdunarodnyy

investitsionnyy bank; International Investment Bank], instituted by the CEMA member states. One of the largest of our industrial projects -- a wool-washing factory -- was recently placed in operation in Ulan-Bator.

Prior to 1961, eight large enterprises of the light industry will be built throughout the country. Spinning, knitted goods and carpet factories and also a plant for the initial processing of hides are being erected with the assistance of the Soviet Union and a shoe factory -- with the assistance of Czechoslovakia.

Just as the international principles of the CEMA Regulations and its complex program are being implemented in actual practice, the levels of economic development for the fraternal countries are gradually drawing together and levelling off as a result of comradely mutual assistance.

#### A. Kotsira: Mutual Assistance Multiplies the Strength of All Bloc Members

"I am in full agreement with my Mongolian colleague: the principle of comradely mutual assistance is the principal factor underlying the relationships between the CEMA member countries. Moreover, it should be borne in mind that the provision of such assistance to one or another of the countries promotes the overall strengthening of world socialism. In the final analysis, this assistance is also of benefit to those states which furnish it.

Let us take my country as an example. The Polish People's Republic is one of the founding members of the Council for Mutual Economic Aid. The PNR has already been participating actively, for 30 years in all spheres of the diverse work of the Council. What has my country gained from this participation?

Imagine for yourself Poland during the initial post-war years. The ruins of Warsaw and the economy destroyed by the fascist aggressors. In restoring our country, we relied daily upon Soviet experience, Soviet support and upon deliveries of raw materials, equipment and food goods from the USSR. Assisted by the Soviet Union, we built our initial electric power stations and the power engineering base for our industry. With the fraternal assistance of the USSR and other CEMA member states, Poland succeeded in creating a powerful modern industry; this was promoted to a considerable degree by the development of international production specialization and cooperation.

The Soviet Union has become our largest customer. We supply the USSR with ships, machinery, paints, chemical products, bituminous coal and even entire plants. For example, our country built and placed in operation a number of sugar plants in the Ukraine and also enterprises for the production of silica brick, sulphuric acid and fibreboard.

I would especially like to draw your attention to the great results achieved through collaboration between many Soviet and Polish scientific-research

institutes, VUZ's and industrial enterprises. For example, there is the very promising design for a self-propelled crane having a lifting capability of from 40 to 100 tons. This is the wonderful result of joint creativity by the collectives of the Odessa Association imeni January Uprising and the Polish Bumar Association.

During the preparation of this article, we attended the 20th Session of the CEMA Committee for Scientific-Technical Collaboration. By no means is it an accident that the structural plan for the Council reflects this committee as being one of the principal organs of CEMA. It plays a great role in the development of long-term special-purpose programs for collaboration and in solving such tasks as the creation of a common system of computers and automatic systems for planning and the technical preparation of production.

The scale of this work is borne out in particular by the scientific-technical collaboration which takes place between the USSR and the GDR in the field of applied studies and developments associated with the creation of new machines, progressive technological processes and new materials. Approximately 300 scientific organizations and enterprises of the Soviet Union are collaborating directly with 400 corresponding organizations and enterprises in the German Democratic Republic. Here is just one result of joint scientific-technical creativity: in 1977, at a quality steel plant in Praytal (GDR), a unique unit was placed in operation -- a plasma steel-smelting furnace having a capacity of 30 tons. It is the first of its kind in world practice.

We are in the spacious and bright hall on the first floor of the tall headquarters building of CEMA. It is here that the communique of the 20th Session of the Committee for Scientific-Technical Collaboration was signed. It was the 20th session for a majority of the participants and yet only the first for the delegation from the socialist Republic of Vietnam, which only last year became a full and equal member of CEMA. As emphasized in the communique, a special decree was adopted for furnishing assistance to the SRV [Sotsialisticheskaya respublika V'yetnama; Socialist Republic of Vietnam] for developing science and engineering. The principal trends for scientific-technical collaboration among CEMA member states up through 1990 were approved. A plan was adopted for a long-term program for collaboration in the field of scientific instrument building and the automation of studies for the 1981-1985 period and for a more extended period of time.

Thus a tremendous volume of work lies ahead, the fulfillment of which must accelerate economic growth for all of the bloc countries.

To what degree are the recommendations made by the CEMA committees and permanent conference committees being employed? Here is what an expert attached to the Department for the Use of Atomic Power for Peaceful Purposes, Vladimir Pavlovich Averkiyev, had to say regarding this matter.

V.P. Averkiyev: When International Collectives of Scientists Set To Work



"Our department is the working organ of the CEMA Permanent Committee for the Use of Atomic Power for Peaceful Purposes. The principal task of the committee is to assist the implementation, in the fraternal countries, of work in the field of atomic power engineering and in the use of nuclear engineering in various branches of the national economy.

By way of a specific example of implementation of the committee's recommendations, permit me to cite the work concerned with creating water-cooled power engineering reactors. A temporary international collective of scientific workers and specialists was created for solving this task. The use of modern theoretical developments, the latest laboratory and technological equipment and the logistical base of corresponding scientific institutes of CEMA member states served to produce outstanding results. The VVER-1000 power reactor was created within a brief period of time; it has a capability of 1 million kilowatts, it exceeds by more than twofold the capabilities of other VVER's and it is economical and reliable of operation.

The scientific research institutes of the Soviet Ukraine are making their own contribution with regard to the work being carried out by the CEMA Permanent Committee for the Use of Atomic Power for Peaceful Purposes. Two years ago one of the meetings of the committee was held in Kiev, at the Institute of Nuclear Studies of the Academy of Sciences of the Ukrainian SSR which, similar to the Institute of Physical Chemistry of the Academy of Sciences of the Ukrainian SSR, is carrying out a number of extremely valuable scientific studies.

With regard to the VVER-1000 units, I wish to inform you that these reactors will be used for new atomic electric power plants, the current of which will flow into the united electric power systems of the CEMA member states.

An important trend in the further development of OES's [integrated power systems] will be the erection, by stages, of the principal network with its voltage of 750 kilovolts. The placing in operation at the end of last year of the inter-system electric power transmission line Vinnitsa - Western Ukraine - Al'bertirsha became the first step in this direction and it was the first such voltage line in Europe. The plans call for the construction of other LEP-750 inter-system lines. As is known, agreements have already been concluded calling for the erection on the territory of the Soviet Union, through the joint efforts of the interested countries, of the Khmel'nitskiy Atomic Electric Power Plant and for collaboration in the construction and operation of the LEP-750 of the Khmel'nitskiy AES (USSR) -- Zheshuv (Polish People's Republic) and a Zheshuv sub-station.

Preparations are underway at the present time for converting over to the parallel operation of two large power associations -- the OES of CEMA member states and the Unified Power System of the Soviet Union. This will expand substantially the scales of collaboration and, in essence, it will unite and make it possible to utilize, in an optimum regime, the power systems over a vast territory stretching from Ulan-Bator in the east to Berlin in the west.

Such are the accomplishments and scales of activity by the Council for Mutual Economic Aid. And it is by no means difficult to understand why this activity continues to attract, to an increasing degree, the attention of practical people in many countries throughout the world.

In the elevator of the Mir Hotel -- a modern 12-story building which nevertheless appears as a humble box squeezed in alongside the huge headquarters building of CEMA -- we are lifted up together with a certain Japanese businessman. The Secretariat worker accompanying him explains in English that it is already late, that the business meetings will take place on the morrow and he advises his guest to enjoy Moscow at night and take in a theatre. The Japanese businessman smiles politely and nods his head in approval. However, one senses that he is already thinking of tomorrow and particularly in terms of successful negotiations.

Yu.P. Zhuravlev: Still Greater Influence on International Relations

"Such visits are by no means a rarity for us" stated a CEMA expert and author of the book "Mezhdunarodnyye svyazi Soveta Ekonomicheskoy Vzaimopomoshchi" [International Contacts of the Council for Mutual Economic Aid], Yuriy Pavlovich Zhuravlev, "the work of our organization is of interest to many foreign firms, associations and scientific and economic institutes. In particular, this interest increased during the year of the 30th anniversary of CEMA."

The Council for Mutual Economic Aid, as emphasized in its regulations, has an open nature. Thirty years of experience clearly testify to the fact that this socialist inter-state economic organization, the first in the world's history, has advocated and continues to advocate the consistent expansion of economic collaboration with all states, in complete conformity with the program of the Socialist Bloc for promoting the process of relaxing tension in every possible way. International relations are being influenced to a greater degree by the basic principles of CEMA operations: complete equality, independence, voluntarism, respect for sovereignty, mutual advantage and mutual assistance and high effectiveness of collaboration for all participating countries regardless of their size or level of economic development. By way of comparison, let us examine the positions of the capitalist states participating in the European Economic Community, depending upon their size and strength: Great Britain, Italy, France and the FRG each has 10 votes, Belgium and the Netherlands -- each five votes, Ireland and Denmark -- three each and Luxembourg -- two votes.

CEMA can invite non-member countries to participate in the work of the Council's organs or to carry out collaboration with them in other forms. It can conclude international agreements with other states and organizations. An example of such collaboration includes the relationships of CEMA with Yugoslavia, the KDR [Korean People's Democratic Republic], Angola, Laos, Ethiopia, Iraq, Mexico and Finland.

Finland was one of the first developed capitalist countries to enter into contractual arrangements with CEMA. The signing in 1973 of an agreement for collaboration between the Council for Mutual Economic Aid and Finland was approved by Parliament and accepted by society as a whole. As mentioned in the Swedish journal EKONOMISK REVYU [Economic Review], the agreement between Finland and CEMA is a model which can be used for developing collaboration between the East and West.

In speaking before the 85th Session of the Executive Committee of CEMA, the President of Mexico, Kh.L. Portillo, stated: "The economic development of CEMA member countries is attracting attention to its stable and long-term dynamic nature, to the harmonious mobilization of financial, human and material resources and to the expansion of cooperation between the economies of the CEMA member states. We are confident that an expansion of technical, scientific and economic collaboration in the various spheres of present and future Mexican development is not only practicable but in fact extremely desirable and useful for both sides."

At the present time, CEMA is maintaining relations with roughly 60 international organizations, of which approximately 30 maintain regular contacts with it.

The above represents some facets of the work being carried out by the Council for Mutual Economic Aid. Indeed, a great deal more could be said concerning collaboration of CEMA member states in the sphere of space studies, agriculture, education and culture, heavy and chemical industries, instrument building, electric welding and environmental protection.

The socialist countries are exerting an increasingly more powerful influence on historical world development by virtue of their successes in socialist and communist construction and their policies of peace and collaboration. We are witnesses of Lenin's foresight concerning the transformation of socialism into an international force capable of exerting a decisive influence on world politics. Today the CEMA member countries constitute a bloc which is stronger than any other alliance or coalition, past or present. This new international association of nations and states has become a powerful factor of modern international development and one which determines the principal trends for social and political progress for mankind.

## INTERNATIONAL ECONOMIC RELATIONS

### ROLE OF CEMA IN DEVELOPMENT OF SOCIALIST ECONOMIES

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[Article by Yu. S. Shirayev, Doctor of Economic Sciences, and A. I. Sokolov, Candidate of Economic Sciences: "The Role of the CEMA in Developing the Economy of the Socialist Countries"]

[Text] At the present time the community of socialist countries is implementing the most democratic principles of international relations. Those are the principles of socialist internationalism, comradely mutual assistance, completely equal rights, the respect for state sovereignty, and the decision on a coordinated basis of the most important socioeconomic problems that confront the fraternal countries. On their basis is constructed the entire multifaceted activity of the Council for Mutual Economic Assistance, which currently unites ten socialist states in Europe, Asia, and America, with a total population of approximately 430,000. "The socialist community," L. I. Brezhnev says, "is an alliance of a completely new type. It is based not simply upon the commonality of the state interests of a group of countries, but also represents a fraternal family of peoples who are led by the Marxist-Leninist parties, and who are joined tightly together by their common political philosophy, their common high goals, relations of comradely solidarity, and mutual support"\*.

During the three decades of the activity of the CEMA, the countries that are included in that organization achieved, under the leadership of the communist and workers' parties, outstanding success in their socioeconomic development. For example, the national income of the CEMA member countries increased in 1978, as compared with 1949, by a factor of 10; and industrial production, by a factor of 17. Occupying 19 percent of the territory and having at their disposal 19 percent of the population, the CEMA member countries produce approximately one-third of the world's industrial output, and are currently providing more than half the increase in industrial production, and their industrial might is greater than that of the United States or the states in Western Europe, taken together.

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\*L. I. Brezhnev, "Aktual'nyye voprosy ideologicheskoy raboty KPSS" [Vitally Important Questions of the Ideological Work of the CPSU], Moscow, Politizdat, 1978, Vol 2, p 137.



During the period that has elapsed, the growth rates for the national income in the countries of the socialist community have tripled those in the world of capital, and the growth rates for industrial production have quadrupled.

During the past three decades the production of industrial output in the CEMA member countries in per-capita terms has increased by a factor of more than 8, at the same time that the average worldwide index for per-capita production increased by factor of only 3.2. The share of the CEMA countries in the world's production of the most important types of industrial output has increased as follows: for electric energy, from 13.6 percent in 1950 to 21.6 percent in 1977; for coal, respectively, from 22.9 to 30.9; steel, from 18.9 to 29; cement, from 13.8 to 27.0; mineral fertilizers, from 20.8 to 36.8; sulfuric acid, from 11.1 to 27 percent, etc. At the present time the CEMA countries produce more than a third of the world's output of machine building and the chemical industry. They have a considerable share, and for certain types of output the overwhelming share, of agricultural production.

While concentrating their efforts on increasing the effectiveness of social production, the CEMA countries carry out the broad introduction of modern advanced technology and the latest technological processes, thus assuring the steady increase in labor productivity. For the CEMA countries as a whole, the labor productivity of the industrial-production personnel increased by a factor of 5 between 1951 and 1977. The increase in the effectiveness of social production was aided by the intensification of the concentration and specialization, the increase in the series production of output, as well as the increase in the extent to which labor was provided with energy and funds.

During 1951 and 1977 the gross output of agriculture in the fraternal countries increased as a whole by a factor of 2.4. In all the CEMA countries the increase in agricultural production was achieved under conditions of a considerable curtailment of the number of workers employed in it. This became possible as a result of the constant reinforcement of the material-technical base of agriculture, the application of modern production methods, and the increase in labor productivity. At the present time the CEMA countries are devoting more and more attention to problems of the further concentration and specialization of agricultural production, and to the development of agroindustrial cooperatives with the purpose of the more complete satisfaction of the needs of the population for foodstuffs.

The fundamental socioeconomic reforms, the increase in the productive forces, the steady improvement of the structure of the national economy have been accompanied by the drawing closer together and the equalization of the levels of economic development. If one considers the European CEMA countries, one can state firmly that, for the basic indices of economic development, the most substantial differences among them have already been overcome for the most part. The center of gravity of the solution of the problem of equalization has currently shifted to the rendering of economic and technical

assistance to such countries as the Republic of Cuba, the Mongolian People's Republic, and the Socialist Republic of Vietnam.

All the activities of the CEMA serve as a unique model of cooperation on the basis of equal rights, the harmonious combination of their national and international interests, and the practical implementation of the principles of socialist internationalism. The efforts of the communist and workers' parties, which are directed at the deepening of the complete cooperation among the fraternal countries, make it possible for the socialist community to implement more consistently in practice the fundamental advantages that socialism has over capitalism in all spheres of social life.

The international socialist division of labor, from the very first steps of its development, has had all the fundamental attributes that characterize it as a new form and new type of international economic interrelations. During the first years after the creation of the CEMA (in 1949), the basic efforts of the countries included in it were concentrated on the solution of the tasks linked with the postwar restoration and modernization of their economy. The basic national-economic tasks that were resolved by the CEMA member countries with the aid of the reciprocal cooperation by the beginning of the 1960's can be summed up as follows: the completion of the postwar restoration of the national economies; the carrying out of the socialist industrialization or the remodeling of industry, and the creation of the material-technical base of socialism; the creation or development of the national scientific-technical bases; the guaranteeing of the import needs that the national economies had for the basic types of raw materials and fuel, foodstuffs, machinery, and equipment by means of reciprocal shipments, the volumes of which were limited to the available resources; the accelerated development of the national economies of the countries that had inherited from the past a backward economic base.

The countries in the socialist community have created a modern structure of industrial production. The most dynamic branches of industry are machine building, the chemical industry, and power engineering, the share of which in the overall volume of industrial output during 1950-1977 increased in individual CEMA countries from 14-38 percent to 35-48 percent. During that period the volume of machine-building output in the CEMA countries as a whole increased by a factor of 27, which is almost 2.5 times greater than the growth rates for the entire industrial production of the CEMA countries, and, in the chemical industry, by a factor of 23.

The branches of industry which were developed first of all in the fraternal countries were those that reinforce the material-technical base of socialism and communism, and contribute to the deepening of the international socialist division of labor in the interests of the entire community. Bulgaria has created such new branches as machine building, ferrous and nonferrous metallurgy, and chemical industry; Hungary, instrument building, chemical machine building, machine-tool construction, and the production of equipment for the extractive and construction industries; East Germany, petrochemistry and

shipbuilding; Poland, shipbuilding and electrical-engineering industry, motor-vehicle construction; Romania, petroleum machine building, machine-tool construction, motor-vehicle, tractor, electronic, and electrical-engineering industries, and the production of aluminum; and Czechoslovakia has further developed the production of bearings, shipbuilding, and the aluminum industry. There has been a constant increase in the share of, and the improvement in the structure of, industry in the Mongolian People's Republic and the Republic of Cuba. The USSR has created such branches of industry as electronics, space technology, the atomic industry, and there has been a considerable increase in the share of the aviation industry and machine-tool construction.

In the course of the development of industrialization, as the CEMA member countries created their new production entities, the Soviet Union expanded the shipments to those countries of raw materials, fuel, and other materials, and, by placing its work orders, helped to establish the proper work load at the enterprises being activated. For many types of raw and other materials, including those which are in extremely short supply (petroleum, ferrous and nonferrous metals, cotton, etc.), thanks to the efforts of the USSR a high level of self-support was achieved in the community of the CEMA countries. The scope of the cooperation in the development of the economy and the role of the USSR in this area can be judged from the following figures: by the beginning of 1978, the Soviet Union, on the basis of various agreements, rendered assistance to the socialist countries in the construction of more than 2600 enterprises and other construction projects, of which 1400 construction projects were in heavy industry and power engineering.

Thanks to the reciprocal cooperation, there has been an increase in the collective technical and economic independence of the socialist community, which independence has nothing in common with collective autarchy, with the striving to isolate oneself by customs or other barriers from the other countries of the world, as is typical of the trade and economic blocs of capitalist states. Within the framework of the CEMA, on a truly internationalistic basis, there has been a resolution of the problem of equal and unhindered access of all the participating countries to modern technology, technical experience, and the achievements of the fundamental research projects. This access is guaranteed by the well-developed system of international cooperatives in the field of science and technology, the joint use of the results obtained on its basis. For example, the use in the foreign socialist countries of the scientific-technical documentation which was transmitted to them by the Soviet Union during the period from 1950 to 1965 made it possible to work out the adjustment problems in production with an annual output valued at 100-120 billion convertible rubles. Together with the technical aid and the shipments of equipment, this line of cooperation provided the scientific-technical prerequisites for production with a scope of 250-300 billion convertible rubles a year\*. At the present time, more

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\*The technical assistance provided by the USSR (preparation of plans for capital construction, shipments of equipment, transmittal of experience dealing with the construction and operation of construction projects, etc.) served as the technical basis -- and, to a certain degree, the

than 3000 scientific-research and construction planning and designing institutions in the CEMA member countries participate in scientific-technical cooperation. During the 1971-1978 period their joint efforts completed more than 14,000 theoretical and applied projects, many of which yielded a large economic benefit.

The rise in the economic potential of the socialist countries, the accumulation of the experience in planned cooperation, created the prerequisites for the further development of that cooperation into socialist economic integration. Ten years ago (1969, Moscow), the 23rd CEMA Session, which was held at the level of the leaders of the parties and governments of the fraternal countries, adopted the decision to develop a Comprehensive Program for Socialist Economic Integration.

The implementation of the Comprehensive Program for Socialist Economic Integration which was adopted by the 25th CEMA Session in June 1971 determines at the present time the entire rate of development of the reciprocal cooperation among the CEMA countries, both for the next few years and for the more remote, long-term view. Integration means the growing interaction of the national-economic complexes in the fraternal countries, as a result of which a broader and broader group of problems representing mutual interest are resolved on the basis of collective efforts, on the basis of taking an approach to them as being problems which, in essence, are international. This is confirmed in the practical situation by the steady development and improvement of the reciprocal cooperation in the most important branches of material production.

A decisive role in meeting the import needs of the CEMA countries for fuel, raw materials, and power is played by the Soviet Union, which, at the present time, supplies more than 70 percent of the very important types of raw materials and fuel being imported by them, including the complete supply of petroleum and pig iron, 85-90 percent of the iron ore, more than three-fifths of the stone coal, manganese ore, cotton, rolled metal, and phosphate fertilizers, and 80 percent of lumber.

The increased scope in the shipments from the USSR to the CEMA countries and their actual benefit from the point of view of the almost complete and stable guaranteeing of power resources on the part of the Soviet Union are attested to by the following figures. The Soviet Union during the current five-year plan will deliver to the CEMA countries 67 billion kilowatt-hours of electric energy, 364 million tons of petroleum, and approximately 90 billion cubic meters of gas, which will be equal correspondingly to the

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material-technical and financial basis -- for the creation in the foreign CEMA countries of the capacities the possession of which, according to a tentative estimate, would enable a country with a population of 35 million persons to achieve the present level of the United States with regard to the production of industrial output per-capita of population.



annual volume of production of electric energy, more than 10 annual volumes of petroleum extraction, and 18 annual volumes of gas extraction in the USSR in 1949, the first year of the CEMA's activities.

With a consideration of the high capital-intensity of the fuel and raw-materials branches, the CEMA countries have been confronted with the problem of organizing cooperation in the area of capital investments. A considerable amount of experience has already been accumulated in this regard. During the first two years of the current five-year plan alone, the construction projects stipulated in the Coordinated Plan for Multilateral Integrational Measures for 1976-1980 utilized capital investments valued at more than 3 billion rubles. The construction of a complex of construction projects has been completed on the Soyuz Gas Pipeline (Orenburg to the western border of the USSR). The construction of this unique construction project is an example of the effective carrying out of operations by an international collective of many thousands of construction workers from the participating countries, and enriches the CEMA member countries with valuable experience in the joint implementation of construction projects of great economic importance. The construction of the first intersystem electrical-transmission line, with a tension of 750 kilovolts, from Vinnitsa (USSR) to Albertirsa (Hungary), has been completed. This will provide the beginning for parallel work in the united power systems of the CEMA member countries and the Single Power System of the USSR, and will make it possible to increase the reciprocal exchange of electric power, and to increase the effectiveness and reliability of supplying electric power to the CEMA participating countries. The rates of construction and installation operations are also increasing at other construction projects that are being constructed by joint efforts.

While rendering all kinds of assistance to the fraternal countries in the development of their national economy and, on that basis, the rise in the national standard of living, the Soviet Union in its turn receives from them various kinds of machinery and equipment, and certain types of mineral [and] agricultural raw materials and manufactured consumer goods. The fraternal countries sell in the USSR market from one-third to one-half their total export of machine-building output. In 1976-1980 it is planned that the socialist countries will ship to the USSR more than 1000 complete sets of equipment for the construction of various industrial projects.

International specialization and cooperation of production within the framework of the CEMA are developing intensively. More than 100 multilateral and approximately 1000 bilateral agreements in this area are in effect among the countries in the socialist community. In machine-building, 79 multilateral agreements are in effect, encompassing more than 8000 different items in machine-building output, which the production of approximately 75 percent of them being planned in no more than two countries, including 45 percent to be produced in only one country, as a result of which there is an increase in the economic effectiveness of the production of that output for the countries participating in the cooperation. Types of production which have been formed into specialized branches are electric-trolley and motor-trolley construction in Bulgaria, motor-bus construction in Hungary,

shipbuilding and chemical machine-building in East Germany and Poland, the production of heavy-duty trucks in the USSR and Czechoslovakia, and petroleum-drilling equipment in Romania and the USSR.

The international specialization and concentration of production makes it possible to organize the production of articles in large series, which production contributes to the satisfying of the needs of all the CEMA countries. For example, at the present time Bulgaria and the USSR account for almost 100 percent of the total production of electric telfers produced in the CEMA countries; Poland and the USSR, more than 90 percent of the total production of excavators; Hungary and the USSR, approximately 75 percent of the motor buses; Romania and the USSR, 97 percent of the equipment for blast furnaces; East Germany and Czechoslovakia, approximately 95 percent of the equipment for the printing industry; etc.

The specialization and cooperation of production exert a greater and greater influence upon the formation of reciprocal commodity turnover. At the present time, more than one-third of the total export of machinery and equipment from the CEMA member countries consists of specialized output. As a whole, the export of machine-building output is increasing at a rate 1.4 times faster than its production. This is an important indicator of the constantly growing participation of the CEMA countries in the international division of labor. During the first three years of the current five-year plan alone, the volume of shipments of specialized output has doubled.

The CEMA member countries coordinate their strategy of specialization and cooperation not only on a multilateral, but also on a bilateral basis. Bilateral programs (general schemes) for specialization and cooperation of production for 1981-1990 are in the developmental stage. On the one hand, the development of these programs makes it possible to ascertain the degree of the self-interestedness of each CEMA participant in the multilateral measures, and, on the other hand, to determine the general prospects for the deepening of the bilateral ties.

The development of cooperation receives its quantitative expression in the growth of the turnover of reciprocal trade among the CEMA member countries. In 1977 the foreign-trade turnover of the CEMA member countries as a whole came to more than 158 billion rubles, including 91.4 billion rubles for reciprocal turnover. As compared with 1950, their overall foreign-trade turnover increased by a factor of 18.2, and the reciprocal turnover, by a factor of 19.5. During the past ten years alone, the reciprocal commodity turnover among the countries in the socialist community has tripled.

The average annual increase in the reciprocal trade during 1950-1977 came to 11.6 percent and was considerably higher than the growth rates for industrial production and the national income. This is convincing testimony of the deepening of the international socialist division of labor and the development of the economic cooperation. The scope of the growth, the present-day volumes of the reciprocal trade, are attested to by the fact that during 1977 alone the absolute increase in commodity turnover (12.0

billion rubles) was equal to the entire reciprocal commodity turnover in 1959.

Within the framework of the reciprocal trade, the CEMA member countries satisfy completely or to an overwhelming degree their own import needs for the basic types of raw materials, fuel, foodstuffs, machinery and equipment, and consumer goods. For example, by means of the reciprocal shipments the CEMA member countries in 1977 covered their import needs for machinery and equipment by 63.5 percent; stone coal, 95.8; coke, 94.4; crude oil, 74.7; iron ore, 74.4; manganese ore, 77.7; pig iron, 94.8; rolled ferrous metals, 63.5; copper, 81.1; aluminum, 87.4; and cotton, 76.4 percent.

An important role in the development of reciprocal cooperation is played by the currency and finance system of the CEMA member countries, the basis of which is the collective socialist currency -- the convertible ruble. During its existence, this system has successfully passed its durability test. As was noted at the 31st Meeting of the CEMA Session, which was held in 1977, under the conditions of the aggravation of the crisis affecting the very foundations of the currency system of the capitalist world there has been a convincing revelation of the advantages of the socialist organization of international settlements, an organization that was created by the common efforts of the countries in the socialist community.

The CEMA member countries created an international collective socialist currency (the convertible ruble), and a multilateral system for settlements in this currency for all types of trade and nontrade payments, and a system of short-term, medium-term, and long-term credit. The currency-finance and credit relations among the CEMA countries correspond to the interests of their planned economic cooperation and assure the equivalency of the settlements and equal rights for all participants.

For the functioning of this mechanism, the International Bank for Economic Cooperation (MBES) and the International Investments Bank (MIB) were created. The MBES began its operations on 1 January 1964, and the MIB on 1 January 1971. The MBES handles the reciprocal settlements among the CEMA member countries for commodity turnover, services linked with foreign trade, and other payments. The bank carries out the granting of short-term and medium-term credit. The MIB is the international credit institute of the member countries, and serves as the source for granting of long-term and medium-term credit for their capital investments in projects linked with the development of economic cooperation.

The multilateral system of settlements and the granting of credit in convertible rubles successfully serves the economic ties among the CEMA member countries, assuring the continuity of the reciprocal currency-finance operations for all their types. During 1964-1978 the reciprocal payment turnover of the MBES member countries reached 727 billion convertible rubles. In 1978 the total volume of settlements among the MBES member countries constituted 106 billion convertible rubles, which is 4.6 times more than in 1964, when the system of multilateral settlements in convertible rubles began to function. During the same period (1964-1978) the MBES granted to

the authorized banks credit in a total amount exceeding 46 billion convertible rubles. In 1978 alone, the amount of credit granted came to approximately 5.7 billion convertible rubles, or 3.8 times more than in 1964.

Growing support for the conducting by the CEMA countries of a coordinated policy in the area of capital investments and for the financing of large construction programs is provided by the International Investments Bank. During 1971-1978 the bank accepted 61 projects for the granting of credit. The volume of the granted credit came to more than 3 billion convertible rubles. Approximately 40 projects have already been activated. Thus, within a relatively short period of time the bank has become a major finance and credit institute in the countries of socialism.

The currency and finance system of the cooperation among the CEMA countries is constantly improving. For example, the principles have recently been developed, which help to resolve many of the current-finance and credit questions involved in the joint construction of projects, and the expansion of scientific-technical cooperation. Standard principles have been accepted for dealing with currency-finance settlements linked with the cooperation in scientific and technical research. Standard principles have been approved for the financing and carrying out of settlements for the international economic organizations in the interested CEMA countries. More favorable currency-finance terms have been created for the development of the cultural and scientific exchange and for tourism.

The prospects for the development of socialist integration are linked with the implementation of the long-term specially-earmarked programs for cooperation, which define the specific measures for the supporting of the economically substantiated needs of the CEMA member countries for the basic types of power, energy, and raw materials; for the development of machine-building on the basis of deep specialization and cooperation of production; the satisfying of the substantiated needs for basic types of foodstuffs and manufactured consumer goods; for the development of the transportation ties among the CEMA member countries; and the bringing closer together and equalization of the levels of their economic development. These programs are closely coordinated with the interests of the further rise in the national standard of living in the CEMA member countries and are called upon to promote the acceleration of socialist and communist construction.

The CEMA Session at the 32nd Meeting (June 1978) approved the long-term specially-earmarked programs for cooperation in the area of energy, fuel, and raw materials, agriculture and the food industry, and machine-building.

The long-term specially-earmarked program for cooperation in the area of raw materials, fuel, and power engineering stipulates the satisfying of the needs of the CEMA member countries for petroleum, petroleum products, and natural gas by means of the continuation of their shipments from the Soviet Union; the slight increase in the countries' own production of petroleum and gas, including that increase achieved as a result of deep drilling and shelf drilling, and the broader involvement, on a long-term



basis, of the resources of petroleum and gas in the developing countries.

An important role in meeting the increasing energy needs of the national economies of the CEMA member countries will be played by the implementation of a general agreement dealing with the cooperation in the long-range development of united energy systems of the participating countries during the period until 1990, which was concluded between Bulgaria, Hungary, Mongolia, Poland, Romania, the USSR, and Czechoslovakia in November 1977. That agreement defines the specific paths for the more complete and more effective use of the energy resources, the intensive use of atomic power engineering, the increase in the reliability of the electrical supply and the implementation of the technical and economic advantages of the parallel operation of electrical power systems. With the use of Soviet scientific-technical elaborations and equipment, the CEMA countries will construct atomic electric-power stations with a total capacity of approximately 37 million kilowatts. These AES will provide electric power the production of which at thermal electric-power stations would require approximately 75 million tons of standard fuel. It is also planned to erect in the Soviet Union on a joint basis two additional AES, with a capacity of 4 million kilowatts each, for the delivery to the interested countries of as much as 50 percent of the electric power produced by those stations.

A factor of special importance is the program for the maximum development of atomic machine-building for the guaranteeing of further progress in atomic power-engineering. In the USSR, with the purpose of the accelerated development of atomic power-engineering, the Atomash Plant, for the production of equipment of AES, is being constructed. A large amount of work to adjust the production of equipment for those electric power stations is also being done in Czechoslovakia, East Germany, and other fraternal countries. Czechoslovakia, for example, is created a large-scale production-technical base for atomic machine-building. In 1976-1980, more than 8 billion korunas are being allocated for these purposes -- approximately 30 percent of the total capital investments in the country's heavy machine-building. The implementation of the planned program will completely satisfy the needs for high-quality equipment for the atomic electric-power stations being constructed.

The long-term specially-earmarked program also encompasses the raw-materials branches, primarily in ferrous and nonferrous metallurgy. By the efforts and means of the European CEMA member countries, capacities are being erected in the Soviet Union for the production of iron-bearing raw materials, which will make it possible, together with other measures, to assure for the most part the satisfying of the needs for those raw materials by 1990. A plan being developed deals with the construction in the USSR of a large-scale metallurgical plant designed for the production of 10 million tons of cast slabs on the basis of ores from the KMA [Kursk Magnetic Anomaly], with the use of Polish and Soviet coking coal. Plans are being prepared for the construction of enterprises for the production of types of rubber and fodder yeasts, and vitamins. The Republic of Cuba and the USSR have proposed the creation of capacities for the production of woodpulp, paper, and

cardboard; Poland, for the production of methionine; Mongolia, for the extraction and processing of phosphorites; and Romania, for the construction of a petrochemical complex.

As a result of the implementation of the long-term specially-earmarked program for cooperation the CEMA countries will be able -- on the whole with fewer expenditures of capital investments, funds, and power resources -- to satisfy by 90 percent their needs for power carriers and 100 percent of their needs for iron-bearing raw materials, ferrous metals, and nickel.

The program for cooperation in the production of the basic types of foodstuffs is aimed at the more complete satisfying of the needs of the population in the CEMA countries for high-grade food products, as well as at the creation of the necessary reserves on the basis of a series of measures dealing with cooperation in the reinforcement of the material-technical base of agriculture and the food industry, and the increase in the effectiveness of production in those branches and in the branches related to them. The CEMA countries long ago assured, on the whole, the needs of the population for foodstuffs on the basis of calorie content: with approximately 10 percent of the world's population, they provide for 20 percent of the world's meat production; 25 percent of the sugar; 30 percent of the animal fats; etc. Nevertheless the structure of consumption and the quality of a number of commodities in the CEMA countries do not yet conform sufficiently to the scientifically substantiated needs.

The long-term specially-earmarked program for cooperation in the area of agriculture and the food industry stipulates the development of measures to promote the intensive development of the production of grain, to increase the production of animal husbandry and other basic agricultural products in each of the CEMA member countries, to reinforce the fodder base, and to develop the production of protein fodders. On the basis of the more effective use of the favorable natural conditions of the CEMA member countries, the reciprocal shipments of output of agriculture and the food industry will expand and grow.

The CEMA member countries are taking all the necessary steps to prepare, by the middle of 1979, long-term specially-earmarked programs for cooperation to satisfy the substantiated needs of the CEMA member countries for manufactured consumer goods, for the development of the transportation ties among the CEMA member countries, including questions dealing with the providing of the corresponding branches with the necessary machinery, equipment, and materials.

The long-term specially-earmarked programs for cooperation and the agreements dealing with specialization and cooperation which have been concluded on their basis, as well as the agreements dealing with joint construction and other forms of multilateral and bilateral cooperation, will be one of the determining elements in the coordination of the national-economic plans for 1981-1985 and the drawing up of a coordinated plan for multilateral integrational measures for that period.

The participants in the conference of the Political Consultative Committee in Moscow on 23 November 1978 asserted the great opportunities and reserves for the further expansion and deepening of the mutually advantageous economic relations, relying upon a solid basis of treaties, among the socialist countries that they represented -- both on a bilateral basis and on a multilateral basis within the framework of the Council for Mutual Economic Assistance in conformity with the jointly approved principles in the interests of accelerating the process of equalization of the levels of economic development, the progress of each socialist country, and the raising of the level of the standard of living and development.

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## INTERNATIONAL ECONOMIC RELATIONS

### SOVIET-POLISH PROTOCOL ON POWER TRANSMISSION SIGNED, VIEWED

Moscow TRUD in Russian 20 Apr 79 p 5

[Article: "The LEP [Electric Power Transmission Line]-750 is the Construction Project of the 1980's"]

[Text] Soviet and Polish specialists signed a protocol in the All-Union Energoset'proyekt [All-Union State Planning, Surveying and Scientific Research Institute of Power Systems and Electric Power Networks] Institute on the procedure for and organization of project planning for an electric power transmission line that will connect the future Khmel'nitskaya Atomic Power Plant with the Polish city of Rzeszów.

Both major projects will lay the basis for joint integrated construction projects by the CEMA countries in the 1980's. The engineering plan has already been drafted for the construction of the Khmel'nitskaya Atomic Power Plant in the west of the Ukraine, not far from the border with Poland. It will be equipped with four VVER [Water-moderated water-cooled power reactor]-1000 reactors with a capacity of a million kwt each. Our correspondent asked L. Peterson, director of the Energoset'proyekt Institute, and E. Jasinaki, leader of the Polish delegation and deputy department director of the Polish People's Republic Ministry of Power Industry and Atomic Energy, to tell about the plan for creation of the electric power transmission line.

"The total length of the electric power transmission line on the Khmel'nitskaya Atomic Power Plant-Rzeszów route will be 377 km," said L. Peterson. "Of these, 265 km will travel over the territory of our country. The erection of high-tension lines is a very complicated job. Our specialists have already gathered no small amount of experience in this. The country's power system accepted a line with a voltage of 750 kilovolts into its ranks for the first time in 1974. Incidentally, this was the first time such a project was carried out on the European continent."

"The LEP-750 consists of gigantic metallic pendaflex frames with a height of up to 40 meters and a weight ranging from 12 to 40 tons, resting on a reinforced concrete foundation with a thickness of three meters. These giants will stand

every 500 meters and will carry 12 steel-aluminum wires on them, each with the thickness the length of a finger. The route must by-pass population points and be situated at a certain distance from communications lines and tele-retransmitters [teleretranslyatory?] in order not to create interference in their operations. Openings with a width of nearly 100 meters will be cut in those places where it cuts across forest tracts. Nearly 600 such pendaflex frames will be mounted on our territory alone."

"Safety in any sort of accident situation will be guaranteed by reliable systems of protective relaying, sensitively responding to damage at any point on the line."

"Our specialists have as of this time already set about execution of the draft for basic technical solutions. The plan is to put the line into operation in 1983."

"Our portion of the route will consist of 112 km," E. Jasinski reported. "Electric power from the Khmel'nitskaya Atomic Power Plant (we shall take part in the construction of this plant by making deliveries of construction machinery, electrical engineering instruments and various automatic equipment) will flow into the power system of Poland in the city of Rzeszów and then on to the Czechoslovak Socialist Republic, the Hungarian People's Republic and the GDR, which will also make their contribution to the construction of both projects. To be sure, we are faced in equal measure with overcoming all those difficulties about which my Soviet colleague has spoken. It is true also that we have our own specific problems. Thus, for instance, we must lay the LEP-750 through a very densely populated region with intensively developing industry. Furthermore, our country's power system has a network with a voltage of 400 kilovolts; hence, a special substation for stepping-down the voltage will be built in Rzeszów. Surveying is now underway in these regions."

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## INTERNATIONAL ECONOMIC RELATIONS

### SCIENTIFIC-TECHNICAL COOPERATION AMONG CEMA MEMBERS

Kiev PRAVDA UKRAINY in Russian 24 May 79 p 3

[Article by V. Bakunov, chief of the Administration for International Scientific Ties of the Presidium of the Ukraine SSR Academy of Sciences: "Scientists Collaborate"]

[Text] The scientists of the Ukraine SSR Academy of Sciences are actively participating in the development of scientific and technical cooperation by the member states of the Council for Mutual Economic Assistance. During the past year alone, the institutes of the Ukraine SSR Academy of Sciences conducted research on 170 themes jointly with scientific organizations from the fraternal countries. Let us acquaint the reader with some of this work.

The CEMA member countries last year organized a new coordinating center on the problem of "Powder Metallurgy" on the basis of our Institute for the Problems of Materials Study. It is engaged in the drafting of efficient methods and equipment for the production of metallic powders, powder alloys and refractory combinations [tugoplavkiye soyedineniya?] and the creation of new baked products made from them. The council of authorized representatives of the center that met in Kiev examined and approved a working plan for cooperation for the period up to 1980.

Another coordinating center of the CEMA is continuing to work successfully on the problem of "Welding." It is functioning with the Institute of Electric Welding imeni Ye. O. Paton as its base. One of the latest impressive results of this cooperation was the manufacture of an experimental batch of semiautomatic "Intermig" welding machines, which represent a successful symbiosis of the most optimum units created in Bulgaria, the GDR and the USSR. These semiautomatic machines, which are intended for welding metals in an environment of shielding gases, are now undergoing production testing in Bulgaria, Hungary, the GDR, Poland, the Soviet Union and Czechoslovakia.

According to the plans for cooperation within the framework of the CEMA, the Institute of Cybernetics is creating a system for the automation of project planning, designing and the technological preparation for production on the

basis of the use of economic and mathematical methods and the means of computer technology. The documentation on this problem has been handed over to the councils of the chief designers of the Unified System of Computers and Series of Small-Scale Computers for utilization in the creation of new computers. In addition, scientists of the Institute of Cybernetics are actively participating in the activity of the commission on multilateral cooperation by the academies of sciences of the socialist countries on the problem of "Scientific Questions of Computer Technology."

The institutes with a physics-oriented profile are participating in joint scientific research work that is being conducted on a multilateral basis and is directed toward the creation of experimental superconducting and some other electric power transmission lines and equipment and materials for them, and are conducting research in the field of the physics of semiconductors, solid-state physics and astrophysics.

A fruitful scientific quest is being conducted by the Institute of Geophysics on 20 international themes that are being developed by the commission on multilateral cooperation by the academies of sciences of the socialist countries on the problem of "Planetary Geophysical Research." The results of many years of labor by geophysicists of the socialist countries have been embodied in the joint monograph, "Stroveniye zemnoy kory i verkhney mantii Tsentral'noy i Vostochnoy Yevropy" [The Structure of the Earth's Crust and the Upper Mantle of Central and Eastern Europe].

Scientists from the institutes of physiology (within the framework of the Intermozg [International Brain] Program), of botany (on the theme, "Study of the Physiology and Biochemistry of Microscopic Water Plants for the Purpose of Controlling Biosynthesis") and of the problems of oncology, etc., are also conducting research together with colleagues from the fraternal states.

Scientific research in the field of environmental protection has become an important sphere of joint work by the CEMA member countries. Thus, scientists of the Institute of Biology of the Southern Seas are participating in the program of scientific-technical cooperation by the USSR and Bulgaria on the study of pollution of the coastal waters of the Black Sea and the composition of microflora in maritime and shoreline waters.

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## INTERNATIONAL ECONOMIC RELATIONS

### INTEGRAL STATISTICAL INFORMATION SYSTEM IN CEMA

Moscow VESTNIK STATISTIKI in Russian No 5, 1979 pp 23-30

[Article by L. Lukin]

[Text] The 30th anniversary of the activity of the Council for Mutual Economic Assistance, the principal organization of multilateral cooperation of the socialist countries of Europe, Asia and Latin America, is being celebrated in 1979. The fraternal commonwealth of the CEMA member countries has made a sizable contribution to implementation of the policy of the communist and worker parties aimed at bringing them closer together and at close interaction in the construction of socialism and communism.

In those 30 years a comprehensive system of multilateral cooperation in the field of statistics has been shaped in the Council for Mutual Economic Assistance. One of the results of that cooperation has been the formation of the integral CEMA statistical information system. Beginning in the fifties, when a system was set up to provide periodic statistical information on the development of the economy and its sectors indispensable to CEMA agencies in working out their recommendations for economic and scientific-technical cooperation, the Council gradually moved on to creation of a new field of statistics--the statistics of programs leading toward integration.

In the present stage the integral statistical information service encompasses the following: periodical statistical information on the economic development of the CEMA member countries; statistical information pertaining to sectors and industries; international comparisons of the most important national-economic indicators; materials of economic-statistical analyses; and the statistics of programs leading toward integration of the CEMA member countries.

The statistical information exchanged on the development of the economy of the CEMA member countries and of its individual sectors is used by agencies of the Council for Mutual Economic Assistance in drafting recommendations for economic and scientific-technical cooperation, in conducting consultations on the principal issues in economic and scientific-technical policy, in organizing the work of coordinating national-economic plans, in drafting

long-range special-purpose cooperative programs, and in preparing multilateral measures leading toward integration.

This information has undergone extensive development since the very beginning of the Council's activity and has become the foundation of the integral CEMA information system. The September 1956 decision calling for the Council's Secretariat to intensify work on summary statistical information on the basis of data concerning progress in the countries' fulfillment of national-economic plans and on development of economic cooperation among them by publishing statistical bulletins on fulfillment of national economic plans and summary statistical reviews of the development of economic relations among the countries and by summarizing statistical data on aspects of development of particular sectors and industries had great importance to its establishment.

When the standing CEMA Commission for Statistics was created in 1962, the exchange of statistical information became one of the lines of its activity. This information, which by and large is based on the use of a broad range of physical and value indicators and calculations of relative quantities (index numbers), comprises the content of statistical collections and bulletins published periodically by the Council's Secretariat. The Standing CEMA Commission for Statistics ensures the uniformity and international comparability of the indicators published by the Council's Secretariat on the economic development of the CEMA member countries.

The program of statistical information publications is constantly being improved and is being enriched with new indicators indispensable to the countries and to the Council's agencies in doing their work in the field of economic analysis.

In the years that have passed there has been a considerable increase in the volume of statistical information exchanged, and its quality and comparability have improved.

The April 1969 decision to publish a statistical yearbook of the member countries of the Council for Mutual Economic Assistance was an important step in development of the exchange of statistical information. This yearbook has been published since 1971 and is intended for a broad readership. Statistical data are given in it according to the methodology adopted in CEMA. It is distributed both in socialist and also nonsocialist countries and is sent to international organizations.

The statistical yearbook of the member countries of the Council for Mutual Economic Assistance contains data on development of industry, construction, agriculture, forestry and the lumber industry, transportation and communications, domestic and foreign trade, education, culture, the health service, social security, as well as the gross national product, national income, fixed capital, wages, population size and employment in the economy of the CEMA member countries.

A special statistical collection was published to commemorate the 25th anniversary of the Council for Mutual Economic Assistance. A statistical collection dedicated to the 30th anniversary of CEMA is in preparation.

Statistical information on development of the various economic sectors occupies a large place in the cooperation organized by the Council for Mutual Economic Assistance. It is used by the CEMA countries and agencies in performing the tasks of cooperation in specific domains of activity which are in the competence of a particular CEMA agency. This information is contained in collections devoted to specific sectors which are published by decision of the Standing CEMA Commission for Statistics and also in statistical materials worked up by the agencies of the Council.

Current statistical data of a sectoral nature pertaining to particular industries and types of activity are furnished the organs of the Council on each CEMA member country by the respective delegations of the countries which are part of the particular organs of the Council.

In requesting specific statistical data the organs of the Council as a rule agree in advance with the Standing CEMA Commission for Statistics on the scope and character of the information to be requested on the basis of the countries' capability of submitting the data and their usefulness.

In the context of the development of socialist economic integration the exchange of statistical information is becoming still more important. In this connection L. M. Volodarskiy, chief of the USSR Central Statistical Administration and chairman of the Standing CEMA Commission for Statistics, has noted: "The principal direction in improvement of the publications of the Council's Secretariat reflecting the economic development of the CEMA member countries is to expand the information on the efficiency of social production, the quality of performance in the broad sense of the word, technical progress, improvement of the structure of the economy and of its individual sectors, and the rise in the prosperity and cultural level of the population. This effort will be conducive to performance of the urgent tasks of the national statistical services of the countries in the present stage, which is to raise the level of economic analysis of the efficiency of social production, of the growth factors of labor productivity, of the utilization of material resources and of the reduction of production cost. At the same time, the publication of data on economic and scientific-technical cooperation of the CEMA member countries will expand on the basis of development of statistics on measures leading toward integration."\*

One of the components of the integral CEMA statistical information system are the international comparisons of the most important value indicators of the economic development of the CEMA member countries.

\* Volodarskiy, L., "The 15-Year History of the Standing CEMA Commission for Statistics: Results and Upcoming Tasks," *EKONOMICHESKOYE SOTRUDNICHESTVO STRAN-CHLENOV SEV*, No 4, 1977, p 98.



Systematic work in the field of international comparisons began in the late fifties in connection with preparation of the basic principles and indicators of the international socialist division of labor.

In the sixties it was concentrated in the Standing CEMA Commission for Economic Affairs. The statistical services of the CEMA member countries took an active part in that work. In the years of that commission's existence, from 1958 to 1971, a large number of materials devoted to this subject matter were prepared. The Standing CEMA Commission for Economic Affairs made comparisons of the principal value indicators on the basis of data for 1959 and 1966 and worked on many methodological problems concerning international comparisons: for example, the "Basic Procedural Principles for Computation of Indicators of Production and Use of National Income," "Basic Procedural Principles on Comparison of Industrial Outputs of the CEMA Member Countries," "Basic Principles for Comparison of the Gross Output of Agriculture," etc.

In the seventies the work on international comparisons was concentrated in the Standing CEMA Commission for Statistics. In 1975 it completed work on comparison of the most important value indicators of the economic development of the CEMA member countries on the basis of data for 1973. This comparison yielded rich statistical material of a unique kind. Comparative data were obtained on such synthetic indicators as national income used, the consumption fund, the accumulation fund, capital investments, gross industrial output, and the gross and final output of agriculture. The comparative statistical information obtained makes it possible for CEMA organs to conduct a macroeconomic analysis of the development of the CEMA member countries and to furnish a comparative description of levels of economic development, of the most important national-economic proportions and of the standard of living of the population of the CEMA member countries.

The Standing CEMA Commission for Statistics undertook in 1976 to accomplish a new stage in the work in the field of international comparisons of the most important value indicators of the economy of the CEMA member countries. It has drafted a program for further work covering the 1976-1981 period and will make comparisons at regular intervals, once every 5 years, on the basis of improvement of the methodology for comparison and expansion of the set of indicators being compared. The principal purpose is still to obtain comparable statistical data (absolute and relative) necessary to comparative macroeconomic analysis of the development of the CEMA member countries.

The next international comparison of value indicators will be done for 1978. Its results are expected in 1980. The set of indicators to be compared has been more narrowly defined. These are first of all those for which a comparison has already been made and whose methodology has mainly been developed and tested: the national income used, the consumption fund, the accumulation fund, capital investments, and industrial and agricultural output. Then the intention is to develop the methodology for comparing a number of new indicators: national income produced, consumption, the social productivity of labor, and the final output of industry. Then the question of performing the relevant computations will be decided.

Methods of multilateral comparisons that make it possible to derive index numbers that meet the needs of an analytical nature and methods of converting the most important elements of national wealth to a comparable currency will presumably be developed in the future and included among the calculations made; there is also a need to study the possibilities for comparing indicators of the balance of intersector relations.

Improvement of the methodology of international comparisons and expansion of the group of indicators compared are being closely correlated with the commission's work to prepare recommendations for a more thorough uniformity of indicators, classifications and nomenclatures, above all a methodology for compiling a statistical balance of the economy, in particular, the methodology for the balance of intersector relations, so that the national statistical service would be able to obtain initial data which would be standardized in its content and could be converted to the comparable currency during the comparisons.

The Standing CEMA Commission for Statistics is using in the international comparisons the experience of other international organizations, above all the UN Office of Statistics in the domain of the methodology of international comparisons of value indicators.

The international comparisons conducted in organs of CEMA have both theoretical and practical significance. The results of the comparisons are being analyzed in government and scientific institutions of the CEMA member countries.

The materials of economic-statistical analyses occupy a considerable place in the integral CEMA information system. Comparison of statistical-economic reviews and the conduct of statistical-economic research with the materials of the countries is one of the functions of the Council's Secretariat. The specific list of survey topics is provided for in the work plans of CEMA organs and is consistent with the interests of the countries' cooperation with one another.

The compilation of surveys has undergone development in connection with the effort to coordinate national-economic plans. One of the first surveys, which was entitled "Summary Analysis of the Economic Development of the Member Countries of the Council for Mutual Economic Assistance in the 1950-1958 Period," which was prepared by the Council's Secretariat in 1960, was used in coordinating national-economic plans of the CEMA member countries in the period up to 1965.

The CEMA Secretariat has made a comprehensive analysis of the process of the gradual convergence and equalization of levels of economic development of the CEMA member countries in the 1960-1975 period on the basis of a system of indicators approved by the CEMA Executive Committee and embracing all spheres of economic activity and also education, science, culture and health care. The data submitted to the Council's Secretariat by the statistical agencies of the CEMA member countries were used for the analysis, and

the results of the comparison of principal indicators of economic development of the CEMA member countries for 1974, which was conducted within the framework of the Standing CEMA Commission for Statistics, were taken into account. Surveys of the development of the various economic sectors are also being prepared.

In the present situation increasingly broad analytical information is being generated as a result of the compilation of the economic analyses and surveys. The work on the surveys is largely subordinate to the study of problems directly related to carrying out the Comprehensive Program for Socialist Economic Integration and especially the long-range special-purpose programs and cooperation. Certain aspects of economic and scientific-technical cooperation will be studied, in particular the development and intensification of the process of industrial specialization and cooperation, cooperation in solving the problems of supplying energy, fuel and raw materials to the economy of the CEMA member countries, satisfying national needs for the principal foodstuffs and industrial consumer goods, and so on.

The problems of economic efficiency will also be reflected in the surveys.

The statistics of measures leading toward integration characterizes the measures and results of economic and scientific-technical cooperation of the CEMA member countries envisaged in the Comprehensive Program for Socialist Economic Integration and the long-range special-purpose cooperative programs.

The course which has been set toward development of socialist economic integration raised complicated new problems both for the government statistical agencies of the CEMA member countries and also for the Council for Mutual Economic Assistance. Statistical information was needed for economic and analytical work being done by the countries and by CEMA organs in connection with socialist economic integration.

A new direction has commenced in the activity of the Standing CEMA Commission for Statistics: development of the statistics of measures leading toward integration, which is becoming an instrument whereby the interested countries can follow realization of measures worked out in CEMA to improve economic and scientific-technical cooperation, in particular the long-range special-purpose cooperative programs and the assignments of the Coordinated Plan of Multilateral Measures Leading Toward Integration. These statistical data are indispensable to analyzing the results of cooperation and to the drafting of recommendations for its development.

In 1973 the Standing CEMA Commission for Statistics undertook to devise a system of indicators necessary to analyze the process of socialist economic integration. In November 1975 the first phase was completed in development of the "System of Statistical Indicators Characterizing Development of Economic and Scientific-Technical Cooperation of CEMA Member Countries and Methodologies for Computing Them."

The multilateral nature of most of the measures in the Comprehensive Program generated multilateral integration planning, which is closely linked to national planning. The first major step in this direction was the plan of multilateral integration measures covering the 1976-1980 period which was adopted in 1975 by the CEMA session. It included the following: measures to build facilities and additional capacities by the joint efforts of the countries to be financed by the interested countries; measures related to multilateral industrial specialization and cooperation requiring substantial outlays of the interested countries; joint measures to work on scientific-technical problems related first of all to carrying out the measures indicated; and multilateral measures aimed at speeding up the economic development and raising the economic efficiency of the Mongolian People's Republic.

Inclusion in the national-economic plans of the CEMA member countries of special sections related to fulfillment of the Comprehensive Program for Socialist Economic Integration and also of commitments under international cooperation and the drafting of a plan of multilateral integration measures made it imperative to devise not only planning indicators, but also reporting indicators reflecting the development of socialist economic integration. The Standing CEMA Commission for Statistics worked out a program of report data pertaining to statistical indicators characterizing fulfillment of the Coordinated Plan of Multilateral Integration Measures of the CEMA Member Countries in the 1976-1980 Period. It is based on the targets of that plan and the system of statistical indicators characterizing the development of economic and scientific-technical cooperation of the CEMA member countries. The program was approved by the Standing CEMA Commission for Statistics in 1976. The goal pursued in preparing the draft of the program was to furnish systematic observation of progress in fulfillment of the measures contained in the Coordinated Plan.

A conference of specialists in the field of statistics of the interested CEMA member countries was held in 1977 in Moscow on problems in following the course of fulfillment of the Coordinated Plan for the 1976-1980 Period. The conference reached the conclusion that further improvement of statistical observation of the course of fulfillment of that plan would require that a number of problems of a methodological nature be solved, problems such as timeliness in furnishing the planning targets to the statistical agencies of the CEMA member countries, ensuring the comparability of targets and reported indicators of the Coordinated Plan, assessment of planned and actual data in comparable prices, and conversion of the reported data to transfer rubles, which are adopted in the Coordinated Plan as the value unit for many integration measures.

The conference also discussed the information of the statistical office of the CEMA Secretariat concerning the principal results of the work done to collect and process reported data characterizing fulfillment of the Coordinated Plan of Integration Measures of the CEMA Member Countries in 1976 and on further work in this field. It was noted that a unified program should



be created within CEMA for collection of reported data on all sections of the Coordinated Plan which meet the needs of all interested organs of CEMA for the relevant information.

The Standing CEMA Commission for Statistics approved in 1978 a program for collection of reported data on progress in fulfillment of the Coordinated Plan of Multilateral Integration Measures of the CEMA Member Countries in the 1976-1980 Period.

In 1979 and 1980 the Standing CEMA Commission is to draft proposals for a unified system of submittal of statistical data by the interested CEMA member countries so that CEMA organs can monitor progress in fulfillment of the measures included in the Coordinated Plan for the 1981-1985 Period.

A fundamentally new direction in joint planning activity is the drafting of long-range cooperative programs. It is promoting intensification of integration planning and is creating a sound material base for carrying out the comprehensive program for socialist integration up to 1990. The long-range special-purpose cooperative programs are aimed at solving key national-economic problems. One of the distinguishing features of these programs is that they are organically linked to the principal indicators of the national-economic plans of the CEMA member countries.

The relevant planning and reporting indicators need to be developed for carrying out the long-range special-purpose cooperative programs. The CEMA Committee for Cooperation in the Field of Planning has prepared model forms and indicators. These initial methodological and organizational materials make it possible to guarantee a unified approach to solving this important problem. Extensive statistical information, which was processed in the respective divisions of the Council's Secretariat, was used in developing them.

One of the tasks in the field of integration statistics is monitoring the countries' fulfillment of commitments in the field of international industrial specialization and cooperation.

Systematic work to create within CEMA a system of statistical indicators characterizing industrial specialization and cooperation began with creation of the Standing CEMA Commission for Statistics. From the very first it has worked to improve the system of these indicators and the methodology of computing them and to furnish statistical data necessary for studying and drafting measures aimed at development of international industrial specialization and cooperation of the CEMA member countries.

Since adoption of the comprehensive program for socialist economic integration the role of intergovernmental industrial specialization and cooperation has increased still more. These forms of cooperation were included among the principal ways and means of continued intensification and improvement of economic and scientific-technical cooperation and development



of socialist economic integration, which necessitated that the relevant statistical monitoring be organized.

For purposes of monitoring and recording progress in fulfillment of those commitments which arise for the CEMA member countries from the agreements concluded among them concerning industrial specialization and cooperation on a multilateral and bilateral basis, the Standing CEMA Commission for Statistics adopted in October 1972 the "Procedure for Monitoring and Recording Progress in Fulfillment of Commitments Arising Out of Agreements Concluded Concerning Industrial Specialization and Cooperation." The countries submit statistical data on specialization to the Standing CEMA Commission for Statistics in conformity with this document.

Scientific-technical cooperation is an inseparable part of the entire cooperation of the countries of the socialist commonwealth in the process of socialist economic integration. It is taking on ever greater importance for performance of the socioeconomic tasks set by the congresses of the communist and worker parties of the countries of the socialist commonwealth.

The broad scale of scientific-technical cooperation within the framework of CEMA, which reflects the amount and makeup of scientific research, the effectiveness of application of its results to production, and also the need for furnishing comparable data to CEMA organs made it necessary to develop and adopt in practice a unified system of statistical indicators characterizing the state and development of scientific research both at the national and also international levels.

Accordingly, in 1969 the Standing CEMA Commission for Coordination of Scientific and Technical Research and the Standing CEMA Commission for Statistics began work to create standardized indicators characterizing not only the state, but also the development of science and technology in the CEMA member countries. Consideration was given to the need to guarantee the comparability of the statistical indicators of research and development work at the international level.

In November 1972 the CEMA Committee for Scientific-Technical Cooperation approved the "Principal Indicators of the Scope and Makeup of Research and Development of the CEMA Member Countries and Also of Scientific-Technical Cooperation." The system of indicators characterizing scientific-technical cooperation encompasses the following fields: coordination of scientific and technical research, exchange of results of research and scientific-technical information, training of scientists, organization of joint symposiums, etc. (on a multilateral and bilateral basis).

Continued improvement of the integral CEMA statistical information system requires that consistency be achieved among its subsystems and among the units included within each subsystem. There is, then, a need for comparability and mutual linkage between the nomenclatures used in the process of working up the information, and in future a unified system of classification

will have to be created, making it possible to obtain comparable data on population, manpower, output, fixed and working capital, capital investments, etc. To perform this task one must guarantee the compatibility and coordination of terms and definitions of indicators, of their components (wherever possible and feasible), and of units of observation in common. This will expand the analytical capabilities of the integral CEPA statistical information system.

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## INTERNATIONAL ECONOMIC RELATIONS

### BRIEFS

**TRANSMISSION LINE IN LAOS**—(K. Stepanov)—Within the framework of putting the agreement between the government of the USSR and the Lao People's Democratic Republic of 19 July 1977 on economic and scientific-technical cooperation into effect, the All-Union State Planning, Surveying and Scientific Research Institute of Power Systems and Electric Power Networks has drafted the technical and economic basis for Laos for construction of a 110-kilovolt electric power transmission line with a length of nearly 80 km. It is planned to run the electric power transmission line from the Namung Hydroelectric Power Station, built by Laos with the assistance of a number of foreign firms, to the city of Vangvieng. The creation of this electric power transmission line will permit a fuller utilization of the capacity of the Namung Hydroelectric Power Station for the purposes of development of the national economic system of the Lao People's Democratic Republic. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 19, May 79 p 21] 8663

**SOVIET-FINNISH COOPERATION**—(TASS)—The second meeting of the working group on cooperation in the field of transport and communications within the framework of the Standing Intergovernmental Soviet-Finnish Commission on Economic Cooperation was held in the city of Rovaniemi in Northern Finland. The Soviet delegation at the meeting of the working group was headed by Yu. L. Brezhnev, USSR first deputy minister of Foreign Trade, while the Finnish delegation was headed by Reino J. Auvinen, chief of the office of the Ministry of Railways of Finland. It was noted in the protocol signed by the delegations that questions of Soviet-Finnish cooperation in the area of freight shipments and passenger transport by rail, maritime and motor vehicle transport and aviation communications and connections between the two countries, as well as the question of navigation along the Saimaa Canal, were examined at the meeting. The participants in the meeting discussed the question of providing for passenger transport, as well as improving and expanding telephone and other forms of communication between both countries with consideration given to the fact that the Olympic Games would be held in Moscow in 1980. It is stated in the protocol of the meeting that the working group notes that cooperation in the area of transport and communications between the USSR and Finland is being carried out in compliance with the statutes of the Long-Term Program for the Development and Expansion of Trade and Economic, Industrial and Scientific-Technical Cooperation between the USSR

and Finland until 1990. During his stay in the country the head of the Soviet delegation was received by P. Väyrynen, Finnish Minister of foreign affairs, and V. Saarto, minister of communications, and also met with A. Karyalainen, chairman of the Finnish section of the Standing Intergovernmental Soviet-Finnish Commission on Economic Cooperation, and had a talk with him. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 19, May 79 p 21] 8663

SOVIET-CZECHOSLOVAK COOPERATION—(TASS)—Basic attention was paid at the 19th meeting of the Intergovernmental Soviet-Czechoslovak Commission on Economic and Scientific-Technical Cooperation, which was held in Prague, to putting understandings into effect that were reached during the visit to Czechoslovakia of a USSR Party-government delegation headed by Comrade L. I. Brezhnev, general secretary of the CPSU Central Committee and chairman of the Presidium of the USSR Supreme Soviet, as well as at a meeting of the heads of the governments of both countries in May 1978 and, to begin with, to drafting a long-range program for production specialization and production cooperation by the USSR and Czechoslovak Socialist Republic for the period up to 1990. The Commission approved the proposals on the development of specialization and cooperation in the production of equipment for individual sectors of industry. Specific agreements were signed. Agenda items concerning the coordination of state plans for the economic and social development of the USSR and Czechoslovak Socialist Republic for 1981-1985 and the expansion of reciprocal commodity turnover were examined. The USSR delegation was headed by K. P. Katushev, deputy chairman of the USSR Council of Ministers, while the delegation of the Czechoslovak Socialist Republic was headed by V. Hůla, deputy premier of the government of the Czechoslovak Socialist Republic. G. Husák, general secretary of the Central Committee of the Communist Party of Czechoslovakia and President of the Czechoslovak Socialist Republic, received K. P. Katushev. The multifaceted development of Soviet-Czechoslovak economic ties was discussed during the course of the cordial and comradely chat. A favorable evaluation was given to the activity of the Intergovernmental Soviet-Czechoslovak Commission on Economic and Scientific-Technical Cooperation and to the decisions adopted at its Prague meeting. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 19, May 79 p 21] 8663

CEMA WELDING TECHNOLOGY CONFERENCE—Kiev, 25 May (RATAU)—Representatives of the People's Republic of Bulgaria, the Hungarian People's Republic, the GDR, the Polish People's Republic, the Romanian Socialist Republic, the USSR and the Czechoslovak Socialist Republic took part in the 8th meeting of the Council of Authorized Representatives of CEMA Member Countries, which was concluded today, on the problem of "Welding." A delegation from the Socialist Federal Republic of Yugoslavia also took part in it. The results of the assimilation in production of joint draftings were examined at the meeting, which was conducted under the chairmanship of Academician B. Ye. Paton, director of the coordinating center. Great attention was paid to the creation in the CEMA member countries of the material and technical base for the production of powdered wire, as worked up in the Institute of Electric Welding imeni Ye. O. Paton of the Ukraine SSR Academy of Sciences, and its use on an industrial scale. New directions were defined for cooperation in the future. "The current meeting," Todor Rusev,

general director of the Bulgarian "Svarochnaya Tekhnika" [Welding Equipment] Scientific Production Combine, said to a RATAU correspondent, "has once again demonstrated the tendency toward a continual increase in the depth of socialist integration in this field. An example of this is the joint work by scientists and specialists of the USSR, People's Republic of Bulgaria and GDR on the creation of the "Intermigmag" semiautomatic machine. There are plans to organize series production of it on the basis of a cooperative of the countries collaborating on it. Such joint work assists us in assimilating scientific-technical innovations more rapidly in the national economies of our countries." [Text] [Kiev RABOCHAYA GAZETA in Russian 26 May 79 p 3] 8663

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## COMMUNICATIONS

### DEVELOPMENT OF BELORUSSIAN COMMUNICATIONS REVIEWED

Minsk SOVETSKAYA BELORUSSIYA in Russian 6 May 79 p 3

[Article by P. Afanas'yev, Belorussian minister of communications: "The Accelerator of Progress"]

[Text] Starting in 1945, our nation each year has celebrated Radio Day. It is hard to imagine modern life without a radio and without radio electronics. The invention of the radio entailed fundamental changes in many areas of the economy and technology. Radio electronics has become a powerful means for accelerating scientific and technical progress, and it plays a particular role in the transmitting and processing of large amounts of various types of data.

Radio helped in developing earth satellites, and in turn the satellites have helped in solving major problems of data transmission. It has become possible to receive the Central Television Programs in the most remote regions of Siberia, the Far East and the Far North. At present the nation has over 70 million TV sets, and more than 2 million of them are colored sets. At present 80 percent of the Soviet population is able to view the Moscow programs.

Radio electronics has helped in developing computers which lay at the basis of the automated control systems (ASU). As of 1 January 1979, in Belorussia there were 194 ASU and 160 computer centers which can solve around 7,000 problems. The computer fleet was 465 machines with a total computational capacity of 13.5 million operations per second.

An important element in the ASU is the communications channels for transmitting information (data) from the users of computer machine time and the long-distance receipt of the computational results. The republic is doing significant work to extend the network of long-distance telephone and telegraph communications and to develop the data transmission network.

Electronics differs also in the fact that there is a continuous discovering and improving in its properties and capabilities. Further search leads to

new important results. The very appearance of semiconductor instruments was a revolutionizing stage in the development of technology. Comparatively recently the so-called large integrated circuits appeared with a content of hundreds or even thousands of different elements in one crystal. This has led to a sharp decline in the size of equipment based on semiconductor instruments. An example would be the pocket computers and portable TV sets.

On the morning of 7 November 1917, the radio of the cruiser "Avrora" transmitted the appeal of the Military Revolutionary Committee "To the Citizens of Russia" over the signature of V. I. Lenin. On the following day the first decrees of Soviet power were broadcast, the Peace Decree and the Land Decree. These broadcasts marked the beginning of the history of Soviet radio broadcasting. At present the nation has 70 million radio receivers and approximately the same number of wire radio broadcast points.

Our republic, as everywhere else in the nation, is carrying out continuous work to further develop and improve the means of communications. According to the estimate of specialists, developed communications increases labor productivity by 10-15 percent in construction, while in agriculture the efficiency of using machines rises by 25 percent.

The capacity of the ATS [Automatic Telephone Exchange] in all the rayon centers of Belorussia is 214,000 numbers. At present ATS with a capacity of 800-2,000 numbers are in operation.

In recent years a great deal has been done to develop the municipal telephone communications. While previously the construction of ATS in large cities was delayed by the absence of quarters and insufficient capital investments, at present these questions are being solved.

In the near future electronic ATS will be put into operation, and these possess smaller size and require less electric power, and can provide a number of additional services for the subscribers.

Radio electronics is gradually developing the shorter electromagnetic waves. At present for communications, radar and navigational purposes, waves are being widely used from the longest to waves of 1 cm and even shorter length. The use of light waves opens up enormous opportunities. These waves in very pure quartz glass can be propagated virtually without attenuation, and this makes it possible to transmit light signals with slight attenuation over very long distances using glass fibers on the order of one-tenth of a millimeter in diameter. There are already experimental cable sections for transmitting light waves the attenuation in which is less than 10 decibels per kilometer. Such lines make it possible to transmit broad frequency bands, and this makes it possible to have many different channels for transmitting the information. The light fiber cables have many other advantages over conventional cables and even in comparison with the coaxial ones. They will be cheaper and lighter, and scarce copper is not required for their production.

There is also a great future for digital communications systems in which the transmission of information, be it telegraph, phototelegraph, telephone, television or computer data, is carried out by a single method with the transmitting of a sequence of digits in a binary code. The use of a digital system will make it possible to have better utilization of the communications lines, to simplify servicing, it will make it possible to give up mechanical contacts and will reduce equipment size. Even now certain types of equipment operating on this principle are being produced.

In speaking of the development of the means of communications, we must certainly mention the role of television in the life of the Soviet people. Some 2 million TV sets in our republic make it possible for a large audience not only to hear but also to see the events which are occurring in our nation and in many parts of the world. The republic has 20 TV stations in operation. Recently a new, well-equipped studio complex was put into service, and this creates conditions for transmitting the republic programs in color.

For more than 6 decades now the radio voice of the Soviet nation has sounded around the world as a passionate propagandist of the policy of the Communist Party and as an inspired and just narrator of the great feats of our people. We are convinced that this voice will be strengthened year by year.

A happy holiday for you, Belorussian communications workers, and workers in the radio industry, radio and TV broadcasting!

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## COMMUNICATIONS

### DEVELOPMENT OF MOLDAVIAN COMMUNICATIONS SYSTEM REVIEWED

Kishenev SOVETSKAYA MOLDAVIYA in Russian 6 May 79 p 2

[Article by V. Russu, Moldavian minister of communications: "Without Paper and Distance"]

[Text] The celebrating of Radio Day in our nation has become a tradition since those solemn days when in the victorious May of 1945 the Soviet government approved the Decree "On Commemorating the 50th Anniversary of the Invention of the Radio by A. S. Popov."

In 1895, the remarkable work of Aleksandr Stepanovich Popov led to the invention of the radio. This developed quickly not only as a means of communications, but also had an enormous impact on many areas of human activity. Having penetrated the sphere of production and management, culture, science and every-day life, and having advanced into space, radio and the subsequently arising electronics have found the widest use in data transmitting devices. For this reason Radio Day is rightly a sectorial holiday for all communications workers.

V. I. Lenin ascribed exceptional significance to putting the means of communications in the hands of the people. In the preparations and during the Great October Socialist Revolution, he pointed out: "...We should...immediately take over the telegraph and telephone, locate our rebel staff at the central telephone office, and connect it by telephone to all the plants, regiments, all the points of armed struggle, and so forth."

In paying attention to the significance of the means of communications in building socialism, Vladimir Il'ich emphasized: "Socialism without the post, the telegraph and machines is an empty phrase." Subsequently, having become familiar with the work of organizing radio broadcasting, V. I. Lenin wrote: "A question of gigantic importance (a newspaper without paper and without wire, for with the loudspeaker and receiver...all Russia will hear the newspaper read in Moscow)."

In following the instructions of the founder of the Communist Party and the socialist state, the Soviet people have created the means of communications capable of transmitting the necessary information for the needs of the national economy and the population both during the years of peacetime labor as well as during the years of combating enemies.

The role of the means of data transmission has increased many fold under the conditions of developed socialist society for managing the economy and satisfying the needs of the workers. This has been reflected in a number of party and governmental decisions on the development of television and radio broadcasting, postal communications, urban and rural telephone communications during the Tenth Five-Year Plan, and the development of a unified automated national communications system (YeASS).

The Moldavian communications workers, in carrying out the party and government decisions, have worked constantly on developing the means of communications and on improving the quality of services and customer relations. On the basis of the most recent scientific and technical achievements, in the republic the television broadcasting facilities have been greatly developed. The use of transmitting equipment operating in the decimeter wave band has provided an opportunity for all the Moldavian population to receive the first program of Moldavian TV and to solve the question of the possibility of the simultaneous broadcasting of two and more programs. At present 50 percent of the population can receive two programs, and around 30 percent three programs. A majority of the TV viewers, in using the appropriate receivers, can receive color programs.

The radio broadcasting equipment operating in the republic provides an opportunity to receive the three national programs and the three programs of the Moldavian Radio over the entire territory.

The Moldavian cities and villages have a diversified network of communications enterprises and departments which provide diverse communications services. During a year the population receives 101 million letters, 563 million newspapers and magazines, 2.2 million parcels, 4 million telegrams and around 10 million money orders and pension payments.

The policy carried out by the Communist Party of improving the material and cultural standard of living of the people has necessitated the accelerated development of telephone communications by the communications workers. Over the last 3 years of the Tenth Five-Year Plan, the capacity of the urban telephone networks has increased by 28 percent, and the number of subscribers by 33 percent. Almost two-thirds of the telephones have been installed in worker apartments.

The development of telephone exchanges is based on the use of crossbar equipment which better meets modern requirements than the previously installed ten-step equipment.



The need for telephone services in rural localities is growing rapidly. The pooling of efforts by the Ministry of Communications, the Kolkhoz Council, the Ministry of Agriculture and the agroindustrial associations such as Moldplodsovyshcheprom [Moldavian Fruit and Vegetable Industry], Moldvinprom [Moldavian Wine Industry], Moldtabakprom [Moldavian Tobacco Industry], the State Committee for the Production and Technical Supply of Agriculture, the Moldavian Consumer Union and other departments having farms in rural localities and the transition from building telephone services for individual farms to comprehensive telephonization of all the farms within an administrative rayon are the most correct way for developing rural telephone communications.

The effect from such a conversion is visibly apparent in Grigoriopol'skiy Rayon, where capital investments have been saved, and the questions of providing telephone communications for the needs of production and management and improving the quality of communications have been solved on a comprehensive basis. At present such communications are being organized also in Rezitskiy, Novoananskiy, Vulkaneshtski, Dubossarskiy, Brichanskiy and Chimishliyskiy rayons.

The workers in the long-distance telephone communications which is the connecting link between the telephone networks of the republic cities and villages are ahead in carrying out their plan quotas and for the most important indicators have reached the targets for the end of the Tenth Five-Year Plan. At present long-distance telephone communications in the republic have been organized on the basis of cable and radio relay lines with the use of modern multiplex equipment making it possible to obtain high-quality calls.

The construction of the Kishenev Automatic Long-Distance Telephone Office planned for 1980-1983 will make it possible to significantly increase the efficiency and quality of telephone communications throughout the republic.

A rise in production efficiency will contribute greatly to successfully carrying out the quotas related to expanding communications services. The introduction of new equipment and advanced labor methods and the fuller loading of existing equipment have made it possible during the first 3 years of the Tenth Five-Year Plan to stabilize the level of the return on investment, to increase profitability by 25 percent and labor productivity by 10.7 percent.

Effective work on successfully solving the questions of the development and introduction of new equipment and advanced labor methods, a rise in the effectiveness of the socialist competition, the constant search and discovery of reserves for increasing production efficiency, the introduction of a comprehensive quality control system for communications, unflinching attention to the questions of improving customer services, and good results from the work of the social organizations--all of this has been brought to prominent positions by the collectives of the Kishenev Long-Distance Telephone Exchange, the Moldavian Republic Radio and TV Broadcasting Center, the Salarash District Communications Center, the Bel'tay Municipal Communications

Center and the Faleshty Rayon Communications Center which have repeatedly been the winners in the 1978 socialist competition.

According to the work results in the third year of the Tenth Five-Year Plan, 493 collectives of the shops and brigades were awarded the title "Collective of Communist Labor," more than 7,000 workers received the title "Shockworker of Communist Labor," 685 persons were awarded the insignia "Winner of the 1978 Socialist Competition," and 16 workers received the insignia "Shockworker of the Tenth Five-Year Plan."

The initiative of the Rostov workers "Work Without Laggards!" has been widely developed in the collectives of the Bel'tsy Municipal Communications Center, the Kishenev Long-Distance Telephone Exchange, the Kishenev Post Office and other enterprises in the sector. This initiative has been supported by more than 2,000 collectives of the communications departments, shops, brigades and sections.

The republic communications enterprises employ the universally respected 18 winners of the Order of Lenin, the more than 500 persons who have received orders and medals of the USSR, the 7 honored communications workers of Moldavia, and the scores of persons who have received the title "Master of Communications" and who have been awarded the insignia "Honored Radio Operator of the USSR."

In noting the achieved successes, the communications workers are focusing their attention on the unsolved tasks and problems. The most important of them are: a further expansion of communications services and a rise in their quality and customer services. The completion of the construction of the Rezina Television Station in 1980 and the reconstruction of the Kagul and Bel'tsy retransmitters will make it possible to expand the range of TV viewers who receive two high-quality TV programs up to 90 percent of the republic's population.

The republic communications workers are experiencing the greatest difficulties in satisfying the demand for urban telephone services. The demand for the installation of urban telephones is so high that the communications workers will be employed in satisfying the applications submitted to the enterprises not only in the remaining years of the Tenth Five-Year Plan but also during the entire 11th Five-Year Plan. Under these conditions the communications workers will show particular concern for the participants of the Great Patriotic War and in keeping with the building of municipal telephone facilities satisfy their requests first.

There is still much to be done on improving the quality of work of the means of communications, particularly the urban and rural telephone service. This work, considering the significant overload of the telephone networks, must be carried out by improving the skills of the operating personnel, and increasing the exactingness and responsibility of each person for the assigned work area. It is also essential to prepare for introducing new types of

telephone equipment which meet modern requirements and which industry will produce in the 11th Five-Year Plan.

An all-round approach to the questions of improving quality on the basis of the further elaboration and introduction of integrated quality control systems at all communications enterprises will make it possible even during the current year to obtain tangible results in carrying out the demands of the 25th Party Congress on improving the quality of all our work, and to more fully meet the needs of the republic economy and population for communications services.

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## COMMUNICATIONS

### BRIEFS

RAILROAD RADIO PROBLEMS--"Dear Editors! I would like to take up the problem which is a great concern for the train marshallers who use radios. We transmit signals to the engineer of the switching locomotive using the portable Dnepr or Tyul'pan radios. If the radio works well then contact can be maintained over a distance of 300-900 meters, but this rarely happens. The radios frequently break down. They are taken off for repairs, but then they return from the shop also in nonworking order. We are kept busy just taking them there and back. And we must also be concerned with duplicating the signals and this greatly complicates the work. A major shortcoming of these radios is that they operate only on one channel. At times when several switching locomotives and train marshallers are working simultaneously, we greatly impede one another. We would like to have a radio which would provide good communications over several channels and with a range of 1.5-2 km." V. Sheremet, train marshaller at Nikopol' Station. [Text] [Moscow GUDOK in Russian 27 May 79 p 1] 10272

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### MOSCOW WHOLE-CONTRACT EVALUATION SYSTEM

Moscow MOSKOVSKAYA PRAVDA in Russian 30 Mar 79 p 2

[Article by E. I. Rozumnyev, deputy chairman of the Mosgorplan (Moscow City Planning Commission)]

[Text] A new system of evaluating the work results of industrial enterprises when each agreement has unconditionally been carried out has exerted a positive influence on strengthening plan discipline. Deputy chairman Rozumnyev analyzes the operation of Moscow enterprises with consideration of this indicator.

An important step in implementing the resolutions of the 25th CPSU Congress on improving planning and management and the entire economic mechanism has been the system, introduced in January 1978, of evaluating the end work results of labor collectives as a function of their having met all output delivery agreements and job authorizations for the entire products list.

Enterprises of all capital industrial branches switched to the new conditions, basically, in 1978. Several, in order to prepare more thoroughly, operated under the new indicator for the entire fourth quarter of 1977. At a number of plants (the "Serp i molot," the electrothermal equipment plant, the designers' watch plant, and others), the new system of recording output delivery assignment and obligation fulfillment has been in place since July 1977.

Much preparatory work preceded the change-over to the new conditions. Production plans at the enterprises were analyzed in detail from the viewpoint of material-technical supply and the conformity of production capacities to the approved plan. Organizational-technical measures aimed at continuous equipment operation and the elimination of bottlenecks, at improving intra-plant accounting and dispatcher services, were worked out. The systems of evaluating the activity and material incentives of all subdivisions and services were also restructured. For example, at the "Moskabel" association, three of the many cost accounting indicators for the basic shops which were previously in effect remain: output volume for the most important types of



products, reduction in prime cost, and level of delivery assignment fulfillment. The size of the bonus depends only on the extent to which a shop meets an assignment for the entire products list. Naturally, the contribution of plant administration and auxiliary shop workers to the overall effort is also evaluated with consideration of fulfillment of contractual obligations by the collective as a whole.

Capital industry's work experience last year and in the first quarter of this year testifies to significant positive advances in meeting assignments in terms of entire products lists and contracts. Enterprise successes are now being judged only in terms of production and marketing plan execution. The measure of the collective's labor contribution to the overall effort is its fulfillment of obligations to customers.

The new indicator has greatly facilitated further strengthening of planned technological and labor discipline in all production links, in all plant, factory and association subdivisions and services, and more precise intra-plant planning.

The CPSU Central Committee, USSR Council of Ministers, AUCCTU and Komsomol Central Committee have placed a high evaluation on the contribution of capital workers to implementing the party's economic and social policies -- Moscow was among the winners of the 1978 All-Union Socialist Competition. This success is a result of the selfless labor of workers, engineers, employees, and of the considerable organizational work done by party, soviet, trade-union, economic and Komsomol organizations to continue developing socialist competition for successful fulfillment of five-year plan assignments and obligations by collectives of Moscow enterprises to their numerous customers.

Given successful fulfillment of the plan as a whole, there are, however, substantial shortcomings in the activity of individual branches of the capital economy and a number of enterprises. The city still has plants and factories which are not coping with contract and job-authorization delivery schedules. Given fulfillment of the realization plan as a whole, a number of enterprises have not fully met plans for delivery of their items to customers. This naturally has caused a whole chain of disruptions in the national economy. But, in addition to their purely economic aspects, such breakdowns also involve another type of negative factor, moral in nature. Output manufactured at capital plants and factories is intended for use by many consumers throughout the country. A Moscow label means not only high quality, but also the precise, punctual meeting of all obligations to customers. Last year, there was a significant shortfall in woodworking equipment, cold-rolled strip, steel pipe, machinery for food, meat-dairy and fish industry, automobile covers, cotton fabric, and certain other types of output. Failures by a number of large Moscow associations and enterprises to meet consumer goods delivery plans are especially alarming. This applies foremost to the "Bol'shevichka" and "Zhenskaya moda" garment associations and to the Footwear Factory imeni Kapranov.

Unfortunately, it must be confirmed that certain enterprises not meeting a significant portion of their orders are given material incentives based on work results at the exact same level as are collectives achieving incomparably better results. Why this paradox? The fact is that at one time the ministries, jointly with the USSR Gosplan, approved a minimum level of plan fulfillment at which bonuses would not be added on at all, and the scale for decreasing bonuses if the plan is executed is higher than that level.

An analysis of last year's work results testifies that many ministries have approached the development of these normative documents with the greatest caution. To support that statement, let me say that at a number of enterprises, bonuses are not paid only if the plan is met by 86-89 percent with consideration of contracts and job authorizations. Nearly half the plants refuse to award any bonuses only if plan fulfillment falls below 90-94 percent. Thus, the shortfall for plants of the Ministry of Machine Building for Light and Food Industry and Household Appliances was set at 7-10 percent, for plants of the Ministry of Electrical Equipment Industry -- 7-12 percent, the Ministry of Instrument Making, Automation Equipment and Control Systems -- 4-8 percent, and the Ministry of Machine Tool and Tool Building Industry -- 6-10 percent.

Last year's results proved that a number of ministries have set overly care-free normatives for many of their enterprises. The overwhelming majority of capital plants and factories have met assignments by 96-98 percent or more. At the same time, quite a large number of them were offered bonuses even if they met deliveries by only 86-90 percent. For example, the "Salyut" Garment Association of the RSFSR Ministry of Light Industry was set a maximum "nonfulfillment norm" of 12 percent, and the actual output shortfall was 1.8 percent (we should note that the branch headquarters was very "kind" to that association in 1979 as well, setting it a 10 percent "nonfulfillment norm" for the umpteenth time). At the Silk Combine imeni Sverdlov, these indicators are 12, 2.7 and nine percent, respectively; at the food combine -- 10, 0.5 and 10 percent, the tire plant -- four, 1.7 and five percent, and the No 2 prefabricated furniture combine -- eight, 0.4 and eight percent.

It is hard to find explanations for the position taken by leaders of ministries which have created such "greenhouse" conditions for their enterprises. One thing is quite clear: such "nonfulfillment norms" do not call us forward or stimulate labor collective activeness in resolving the tasks of unconditional fulfillment of obligations to customers. Such soft norms must be adjusted towards greater rigidity. In our view, in a majority of cases the cutoff point should be last year's results. Also, if an enterprise's delivery plan fulfillment level is worse than the branch level achieved, there should be no talk whatsoever of material incentives.

Last year, the USSR Ministry of Ferrous Metallurgy set a three-percent normative for the Moscow Pipe Plant. The result actually achieved was 1.7 percent, and the 1979 assignment is one percent. The "Krasnyy bogatyr" Association: 1978 -- eight percent, this year -- four percent. The Chemical

Plant imeni Voykov was five and two percent, respectively. Numerous such examples could be given. And behind each is the effort by labor collectives to consistently achieve fulfillment of their plans and contractual obligations to customers.

In conclusion, we must deal with several factors hindering plant, factory and association collectives in achieving higher delivery plan fulfillment results. At many enterprises, especially machine-building ones, where the output produced is equipment and is financed through capital investments, the threat often arises of disruptions in assignment fulfillment due to customer insolvency. There are substantial difficulties with product shipments due to problems with transport organizations. The responsibility of supply organizations for failure to provide enterprises with material and technical resources is obviously inadequate. The practical application of the new instruction testifies to the necessity of making definite adjustments in its mechanism of operation. And it is first of all necessary to improve the system of contractual obligations of industrial enterprises and transport organizations, to improve calculations between suppliers and customers, and to increase the responsibility of the USSR Gosnab, USSR Gosbank, USSR Stroybank, USSR Ministry of Railways, and transport ministries.

The CPSU Central Committee, USSR Council of Ministers, AUCCTU and Komsomol Central Committee decree defined the basic directions of development of the socialist economy this year. These instructions apply directly to the operation of Moscow's economy. The 23rd city party conference focused the attention of party organizations and labor collectives on solving pivotal problems of the capital's socioeconomic development, on unconditional fulfillment of the 1979 State Plan and the five-year plan as a whole. The party conference appealed to communists and all capital laborers to be in the vanguard of the All-Union Socialist Competition for Increased Efficiency and Improved Work Quality. Working Moscow will undoubtedly continue to make a worthy contribution to the cause of building communism and will meet socialist obligations with honor.

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## CONSUMER GOODS AND DOMESTIC TRADE

### INVENTORY RATE-SETTING METHOD PROPOSED FOR FAR NORTH

Moscow SOVETSKAYA TORGOVLYA in Russian 17 May 79 p 2

[Article by Candidate of Economic Sciences L. Magovitsina, head of the chair of statistics at Novosibirsk Institute of Soviet Cooperative Trade: "Not By Chance"]

[Text] One important task set the country's national economy by the 25th CPSU Congress is to improve the system of rate-setting and recording expenditures of raw and other materials, fuel, energy, and also material commodity stocks. This relates directly to trade.

It is far from a matter of indifference to the state what proportion of the aggregate social product is diverted into inventories. However, the trade economic and commercial services, including those in cooperative trade, have thus far lacked a good method of setting commodity stock amounts.

On instructions from the Rospotrebsoyuz, associates at our chair have attempted to create a method of setting commodity stock amounts for consumers' cooperatives in the Far North and comparable locales.

During the course of long investigations the mechanism whereby stocks are created and up-dated in this zone was revealed. Then methods instructions were worked out for analyzing and setting rates for such stocks. We received much assistance from workers of the Rospotrebsoyuz economic planning administration. Together with them, our institute organized a seminar of economists from cooperative organizations of the Far North and other regions bringing in stocks early.

This was the first time such a seminar had been held. Long prior to it, cooperative organizations received a draft of the methods and were able to verify the calculations in practice. The discussion was therefore business-like. Disputed factors were revealed and supplements and refinements made.

Summarizing the joint work of scientists and practical workers, methods instructions were polished and recommended for introduction at the seminar. Economists of the Tomskaya and Irkutskaya oblast potrebsoyuzes and the Komi potrebsoyuz took up the new matter actively. Thanks to the use of the new method in Kamchatka, for example, commodity turnaround time was shortened and individual organizations reduced their stocks by 10-15 percent.



The creation of methods principles of setting stock amounts for irregular up-dating is continuing. The next stage is the development of methods for wholesale bases and stores proper. Their use will lead to further reduction in the absolute size of commodity stocks, to faster turnaround times.

This work would be even more effective were it to be done not just for the consumers' cooperative system, but also to include stocks of all trade organizations, and not just in the Far North. Currently, irregularly up-dated commodities comprise more than nine billion rubles nationwide. Were they to be reduced by a minimum of 10 percent thanks to such rate-setting, even that would provide a substantial gain.

The demand for such goods would be reduced by more than 900 million rubles nationwide, the demand for circulating capital by 765 million rubles, and the demand for Gosbank credit by 685.5 million rubles. Distribution costs would be reduced, as would expenses on delivering and storing goods, natural losses and spoilage, and the amount of unmarketable and slow-moving goods. According to our calculations, the minimum impact might reach 15 million rubles.

But everything I've spoken of is only part of a large amount of work needed to create methods of setting commodity stock amounts. That work is now being done by collectives of the TsINOTUR [expansion unknown], TsNLS [Central Scientific Research Laboratory of the Match Industry], Tsentrosoyuz, UkrNILTOP [Ukrainian Scientific Research Institute of Trade and Public Catering], Moscow Institute of the National Economy imeni Plekhanov, and Novosibirsk Institute of Soviet Cooperative Trade. It is gratifying to see that stores are receiving finished norms conforming to their economic characteristics (trade turnover volume, trade floorspace, specialization, frequency of deliveries to them, and so forth), rather than methods of calculation. However, the research is poorly coordinated and a unified approach is lacking.

An example. The Tsentrosoyuz board approved sample commodity stock norms, developed by the TsNLS, for department stores. Work to set norms for interrayon bases and rayon potrebsoyuzes, as well as stores specializing in cultural, personal and household items, is nearing completion. And they are to be in days.

But then the TsINOTUR has proposed norms for different types of stores depending on trade floorspace and based on assortment lists, and they would be not in days, but in total and number of varieties. We do not intend to analyze here the advantages or shortcomings of these methods, but there is no doubt that the basic principles of the calculations must still be coordinated.

Creation of the normative base is being held up by poor work coordination, prompting the thought that the efforts of all the organizations concerned with this problem should be joined. Various ways are possible: organizing a coordinating council and involving scientific institutions of the Tsentrosoyuz, or even creating a scientific research institute of stock rate-setting.



And perhaps there are other variants as well. We, for example, think that only a specialized institute is capable of solving the problem in a basic manner.

Setting rates for stocks is not an isolated, one-time act. These norms will be subject to periodic review as changes occur in production and commodity circulation levels and structures, in the routes and link structure of commodity movement, in development of the trade network and other factors. That means they will need systematic research and improvement. Only a special institute will be able to raise the scientific validity of the norms, accelerate their development, and create a sound base for introducing automated control subsystems into trade.

I should like to touch on one other problem in more detail. The existing rate-setting system is also imperfect because it does not encompass all stocks. The reference is to goods ordered for early delivery, seasonal items and goods stored for long periods. They might be called irregularly up-dated goods. But since they comprise a small proportion of the total, perhaps they don't play an important role in commodity circulation? Let's look.

Irregularly up-dated stocks comprise about one-fifth of the country's total retail network commodities. In the RSFSR, their proportion is even higher, 23 percent, with a general tendency towards increasing. In many economic regions of Western and Eastern Siberia, the Far East and the European North, such stocks predominate, and in Murmanskaya, Kamchatskaya, Magadanskaya and Sakhalinskaya oblasts and Yakutskaya ASSR there are practically no current-accumulation stocks.

What characterizes irregularly up-dated stocks? The greatest volume per 100 rubles of circulation, slow turnaround time, and a high proportion of unmarketable and slow-moving goods. It is very difficult to maneuver them, so monitoring their condition and distribution takes on special importance.

However, the picture we actually see is the reverse: there are no norms here. Under the current methods, the level of irregularly up-dated goods is simply subtracted from the total stock amount. There are no statistical publications on it, and they are not included in the state system of analysis and planning. It is therefore impossible to judge the extent to which the available stocks meet our needs. They accumulate spontaneously and to some extent randomly. But can we just leave this to chance?

We must accelerate the development of methods of setting rates for commodity stocks for all the country's zones and systems.

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## CONSUMER GOODS AND DOMESTIC TRADE

### RETAIL TRADE TURNOVER STATISTICS FOR FIRST-QUARTER 1979

Moscow SOVETSKAYA TORGOVLYA in Russian 17 May 79 p 1

[Article by D. Smoktin: "All Reserves Into Play"]

[Text] April 1979 state and cooperative trade commodity circulation was 20.52 billion rubles, including 5.55 billion rubles in consumers' cooperative turnover. Moreover, consumers' cooperative organizations sold agricultural products purchased at contracted prices and on consignment which were worth 127 million rubles. The plan for the second quarter in April was met by 33.6 percent. As compared with January-April 1978, retail trade turnover had increased 4.2 percent, in comparable prices in January-April 1979. The January-April 1979 trade turnover growth as compared with January-April 1978 is given for the union republics below (in comparable prices):

RSFSR	103.6	Moldavia	106.2
Ukraine	104.0	Latvia	101.9
Belorussia	106.2	Kirgizia	106.3
Uzbekistan	107.7	Tadzhikistan	106.5
Kazakhstan	104.9	Armenia	105.5
Georgia	106.9	Turkmenia	105.1
Azerbaijan	106.7	Estonia	105.0
Lithuania	106.6		

During the first four months of this year, retail commodity circulation increased by 3.254 million rubles, or 4.2 percent in comparable prices, as compared with the corresponding period last year. State trade met the plan assignment set it by 99.9 percent, and consumers' cooperative trade -- 100.4 percent.

The trade turnover of state trade and consumers' cooperative organizations of Lithuania grew at higher rates than anticipated. Here, the plan for the first four months was met by 103.1 percent. Good results were also achieved by trade workers in Estonia, Kirgizia, Azerbaijan and Belorussia. The plan

for the first four months was overfulfilled and the supplemental trade-turnover assignment was fulfilled in these republics, as well as in Tadzhikistan, Moldavia and Moscow.

Trade organizations of the Russian Federation operated well below their potential during these months, failing by 177 million rubles to meet the trade-turnover plan, and the Ukraine was also 40 million rubles short.

The active involvement of existing commodity stocks in trade turnover and the uninterrupted provision of stores with items in adequate assortments are basic conditions for commodity circulation plan fulfillment. However, in a number of union republics insufficient attention is being paid to these questions. In a number of places the supplemental trade-turnover assignment has not been met while considerable above-normative commodity stocks have been accumulated at the same time.

A number of places lack goods needed by customers due to uneven deliveries of consumer goods and to industry's failure to meet its obligations to trade. In this connection, it should be noted that many wholesale and retail trade organizations and enterprises have been less demanding of industry and have failed to make full use of their rights to pressure suppliers. As a result, in spite of the fact that deliveries of retail goods fell within plan limits for the first quarter as a whole, trade failed to receive considerable amounts of needed goods. Thus, it failed to receive cotton fabrics, kerchiefs and knitwear items worth 18 million rubles. The shortfall in cultural, personal and household items was more than 250 million rubles.

Instances of reduced production of inexpensive but necessary goods and their replacement by items made of expensive raw material and often finding no market among customers, but which are "profitable" for industrial enterprises, have become more frequent recently.

An important role in the formation of commodity resources, increasing trade turnover and improving services to the population belongs to the interrepublic deliveries and supplies of goods to the unionwide fund. This source takes on special significance in republics which do not have production facilities of their own and which meet the demand by importing needed goods from other republics.

At the same time, the wholesale organizations and industrial enterprises of individual-supplier republics are not following established procedure for priority shipment of goods based on interrepublic delivery and unionwide fund delivery plans. Wholesale organizations and industry in the RSFSR, Uzbekistan, Georgia, Armenia and Kirgizia failed to ensure fulfillment of the plan for shipping cotton fabrics to other republics by more than 21 million rubles, and the RSFSR, Georgia and Kazakhstan had a shortfall of 35 million rubles for wool fabric shipments of this type. This caused quite a bit of harm to the planned provision of commodities to many trade organizations.

The total trade-turnover volume for public catering enterprises in January-April was 7.355 million rubles, 4.7 percent more than in the corresponding period last year. The plan for the first four months was met by 101.2 percent by all union republics. Self-produced output worth 65 million rubles was sold above the plan. Its increment as compared with January-April last year was 4.3 percent. Self-produced output sales increased at the highest rates at public catering enterprises of Turkmenia -- 8.9 percent, and Tadzhikistan -- 8.2 percent.

Real potential for increasing trade efficiency and successfully meeting plan assignments for the second quarter lies in securing what has been achieved, making better use of existing production capacities, and improving the forms of service to the population.

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## CONSUMER GOODS AND DOMESTIC TRADE

### OFFICIALS CALL FOR IMPROVEMENTS IN TRADE SERVICES

#### More Attention For North's Trade Services

Moscow SOVETSKAYA TORGOVLYA in Russian 24 May 79 p 2

[Text] The Collegium of the RSFSR Ministry of Trade has examined the problem of the work of the main administration of workers supply [glavurs] and the administrations of workers supply [ursy] in the natural gas regions of the Tyumen' North.

It was noted that ursy of the union ministries of the petroleum and gas industries and the glavurs of the USSR Ministry of Construction of Petroleum and Gas Industry Enterprises are taking definite steps to improve trade services for the population living in natural gas-producing regions. They are meeting the established targets for trade turnover, they are attempting to insure the prompt delivery of goods to remote parts of the oblast and their distribution and sale, and they are seeking additional reserves. All this makes it possible to supply the workers engaged in construction and in exploiting the natural gas deposits of Tyumen' oblast normally.

The collegium noted, however, that the state of trade and the public dining facilities in the cities of Surgut, Nefteyugansk, Nizhnevatsk, and Nadym, as well as in the settlements of Urengoy, Pravdinsk, Agansk, Tagrinda, Raduzhnyy and some others still do not meet existing standards. And the fundamental reason for their shortcomings is the serious lag of the supplies and machinery base of trade behind the growth of the population and trade turnover. The industrial ministries and the organizations they have jurisdiction over are actually frustrating the fulfillment of targets for trade services for the Northerners. The targets established for commissioning trade enterprises are met by some stores, general goods warehouses and vegetable and potato storage centers by a little better than a third, and by enterprises of public dining by less than one-half.

Accordingly, the population is provided with one-half or one-third the necessary number of trade enterprises. As a result a strain is developing



in the trade services for the population of this fast-growing area that is so important for the economy of the country, and interruptions occur in providing many different goods.

Despite such clear problems, the significant funds appropriated for developing the supplies and machinery base of trade annually are not assimilated. The 5-percent deductions from residential construction are also poorly assimilated.

Unfortunately, administrators of the ursy of the Ministry of the Gas Industry and the Ministry of the Petroleum Industry and those of the glavurs of the Ministry of Construction of Petroleum and Gas Industry Enterprises frequently protect the departmental interests of the ministries they represent to the detriment of the consumers' interests. Even when drawing up development plans for the network at the ursy and glavursy they at times clearly underestimate the size of the population serviced.

The board of the RSFSR Ministry of Trade has demanded that the ursy and glavurs take measures to strengthen the supplies and machinery base of trade.

The administrations of trade and public dining facilities of the Tyumen oblispolkom have been entrusted with strengthening control over the work of the ursy of industrial ministries and with keeping the party and soviet organs informed on the state and the development of trade in the northern part of the oblast.

#### Problems with Sale of Marked Down Goods

Moscow SOVETSKAYA TORGOVLYA in Russian 24 May 79 p 2

[Text] It is no secret that consumers are sometimes wary of goods being sold at reduced prices: They don't want to have a fast one pulled on them. But in this country they generally lower prices for items that are in good condition, but for which demand has for some reason declined. It's true that they might be out-of-style brands, styles or colors; but certainly they have no serious qualitative defects. Consequently, in order to dispel people's mistrust we must, so to speak, display the goods to their best advantage.

Unfortunately many commercial organizations do not know how, and others simply do not want, to really increase the sale of marked-down goods. And the attitude toward selling products at reduced prices is in any case indifferent: "If they're sold--fine; if not--no harm done." And they cover the counter with wrinkled clothes, dusty shoes. Of course one would hardly be tempted to buy goods displayed like that.

There are tricks to selling marked-down goods. It has been established that some stores in the Russian Federation sell old models of some items together with the new models. Such "neighborliness" is not to the advantage of the item that is out of demand. Nor is it to the advantage of the

new model, since it is much more expensive. A different miscalculation; in some stores, for example in the Sverdlovskaya Oblast administration of trade, they offered wrinkled clothes for sale, and the customer walked right by them. These are not isolated instances; similar ones occurred in the Lukhovyitskiy rayon in Moscow Oblast, in Muchkapskiy and Michurinskiy rayons, in the city of Michurinsk in Tambovskaya Oblast, and in organizations of the consumer cooperative in Volgogradskaya and Voronezhskaya oblasts.

In many cities and villages in the Russian Federation they do not even worry about special places for selling things at reduced prices. Here they did not find any better place than crowded counters or kiosks where it is impossible to arrange a display of goods. And so it frequently happens that clothes, shoes and piece goods lie literally in a heap, making it difficult for the customer even to look them over.

A high standard of service must be set regardless of what type of products a store sells, whether new items or products upon which fashion, so to say, did not smile. A low level of commercial service in stores selling reduced-price goods interferes with the timely realization of products and leads to substantial losses. It was not due to chance, therefore, that last year commercial organizations were not able to sell all the cheap shoes, clothes and material intended; sales ranged from 80 to 85 percent of [the planned] amount. On 1 January 1979 marked-down goods valued at over R120 million remained unsold.

Another, no less important, aspect of the matter is how the discount fund is used. As is well known, this fund is formed by deductions from retail trade turnover to cover losses resulting from reducing prices on goods that are not selling. But what is this fund not wasted on! Some commercial organizations use it to make up losses resulting from mismanagement. Others charge the reductions in the prices of damaged goods to this fund, although by law the loss resulting from this should be made up by the persons responsible. In a number of cases even goods in great demand were discounted. Here are some examples:

The Kariiskaya wholesale base Roskhozorga cut R50 off the price of seltzer cartridges. Their last date of sale had passed, and they were not to be sold. Gorpromorg No. 1 and the Central Department Store at Bryansk reduced the price of imported clothing although they could not satisfy customers' demands for them. The losses resulting from reducing the prices of these goods were covered by special deductions in the price-reduction fund.

Treating special funds in such a high-handed manner ends up meaning that sometimes there is not enough money for discounting outmoded fashions and models. And since they are not brought at their original price, the goods continue to lie in the warehouses or in the stores.

The incorrect utilization of funds leads to other occurrences that are, shall we say, difficult to understand. Imagine that one and the same item is being sold in two neighboring stores at different prices--in one higher, in the other lower. "How's this? What's the reason?" the customers wonder. Really, why were woolen shawls, merchandise type 7358, being sold in Donskoe village at R'D, and in Khmelinty village at R8? Women's wool suits were cut to R70 in the Donskoe store and to R60 in the store in the city of Zadonak. Imported children's suits at the "Child World" in Zadonsk were being sold at R10, and at the store in Khmelinty they were offered at the original price, with no markdown. And all this was in the commercial enterprises of one and the same Zadonskiy rayon in Lipetskaya oblast.

The basic purpose of marking down out-of-style fashions and patterns no longer being manufactured is to sell these goods as quickly as possible and make available funds for using them for buying new goods the customer needs. To do this it is necessary first of all to hand over the marked-down goods to the retail network immediately and not allow them to lie for months on end in the warehouses and bases of the commercial organizations, as happened in the Michurinskiy gospromtorg in Tambovskaya oblast, for example. Many marked-down goods were kept for long periods in warehouses there, and certain ones for so long they could not be given away. At the department of worker's supply at the Sayano-Shushenskaya GES, there were no marked-down women's slacks, skirts or dress goods, although there were in the warehouse. It was the same in Novoanninskoye rayon consumer society in Volgogradskaya Oblast, in the department of workers supply of Nyandomskiy timber management in Arkhangel'skaya Oblast, in store No. 22 of the milling khoztorg [specialized market for domestic goods] in Voronezhskaya Oblast, in the Zabaykal'skiy market in Chitinskaya Oblast.

And it is completely unacceptable that certain organizations should continue to accept from industry at the original price-schedule goods that are being sold in the stores at marked-down prices. And almost at once they are forced to cut the price of these goods, to take additional losses, making these up once more out of special funds. The children's department store Solnyshko in the Rostovskaya Oblast administration of trade reduced the prices on a large batch of shoes in February 1977. And then between February 1977 and December 1978 the store accepted 96,000 pairs of exactly the same kind of shoes from the supplier at a cost of R320,000. In 1977, R192 worth of men's raincoats made of "Bologna" material were delivered to the Chelyabinsk sewn-textile market, even though similar raincoats had been reduced there a short while before. But...in 1978 the market accepted another R70,000 worth of these raincoats.

Reducing the prices of goods is unavoidable, since their production increases, and fashions change rapidly. Carried out in a timely and practical way, this work can produce a sizeable economic return. But sales of such goods must be carefully organized and carried out in the shortest possible time, since they begin to look shopworn when kept for a longtime, resulting in a very great damage to the national economy.

## Working to Satisfy Consumer Demand

Moscow TRUD in Russian 19 May 79 p 2

[Text] In recent years it has been possible in our oblast to buy quite easily many goods that not so long ago were in very short supply. This is the result of purposeful work on the part of the oblast party, soviet, union and economic organs on expanding the production of consumer goods to the utmost, on broadening the selection of these goods and improving their quality.

During this five-year plan, the production of more than 170 new products and improved models has been mastered by our enterprises, and over 300 described consumer goods have been awarded the Emblem of Quality. It is no mere chance that trade turnover in the oblast has increased by R285 million since the beginning of the five-year plan.

But far from everything possible has been done to broaden the selection of consumer goods and most importantly, to substantially improve their quality. Meanwhile, it is precisely these indexes that are acquiring fundamental importance. The shortage of a number of goods is pointed up at times by surplus stocks of them at [wholesale] bases and warehouses: There is not a demand for every kind of goods, just for those meeting consumer requirements.

Here is a specific example. The demand for cameras in our oblast is not adequately satisfied. Amateur photographers ask for "Kievs," "Zenits" and other popular brands, and the stores offer the "Viliyas" and "Viliya-Aytes" made by the Minsk machinery plant. These cameras are not to the taste of the customers, and therefore a large number of them have piled up in the warehouses of the wholesale base Roskul'ttorg and other commercial organizations.

We all try to dress handsomely and stylishly, but the goods offered for sale in the stores do not always allow us to do so. Obsolete items, and those of poor quality into the bargain, are supplied to Kuybyshevskaya Oblast by the Makhachkalinskaya shoe factory and the Bakinskoye production association. The wool suits from the Cheboksarskaya clothing factory are unattractive: The colors of the cloth used to make them are monotonous and they are poorly made. Because they are poorly made and fabric used in them is shoddy, men's woolen trousers from the Volga sewing association of the Kuybyshevskoye administration of local industry do not find buyers. This is how it happens that the stores are crammed with shoes and clothing, and yet there's often nothing to buy.

A solution suggests itself: Even without expanding existing output or investing extra capital, it is possible to satisfy the demand for a number of goods much more completely by sharply improving their quality.

The commercial sector bears an especial responsibility in this regard, since it is trade that protects the consumer's interests by obtaining from the enterprises only deliveries of highly quality goods that are in demand.

But can the commercial sector, using the rights allotted it, effectively influence suppliers?

The commercial sector generally presents its orders and requests determining the oblast's requirement for consumer goods a year before the date of delivery. This is done so that the needs of the oblasts for goods can be considered as much as possible in preparing for the republic and inter-republic wholesale fairs. It is assumed that industry, orienting itself according to trade's orders, will react in a practical manner to changes in the situation.

In practice, however, it quite often turns out that at the beginning of the fair, resources and industrial programs have not been determined, and that specifications are made as matters proceed. This interferes with the qualitative examination of purchase plans. Thus, the RSFSR Ministry of Light Industry changed the production programs for sewing associations of Kuybyshevskaya Oblast for 1979 sales of sewn products during the republic fair. The position of the footwear association was still more complicated: Changes in its production plan were not made until 2 months after the fair!

The most important function of the wholesale fair is to serve as the place where the commercial sector selects the best of the goods offered by industry, thereby stimulating the production of those products in the greatest demand. But in fact suppliers most often make their decisions regardless of fairs.

For example, we are forced to obtain schoolchildren's shoes and ladies' slippers from the Saratovskaya, Ul'yanovskaya and Bryanskaya shoe factories, although there is no demand for them: They are heavy shoes, the styles are out of fashion.

It might be objected that there is a decree according to which manufacturers have to pay a fine for supplying low-quality, defective products. Enterprises are obligated to recompense trade for losses. In addition, and this is what is important, returned goods have to be replaced--i.e. the total volume of trade is maintained.

This apparently well-thought-out mechanism unfortunately would appear to function poorly. Low quality products are, as a rule, not compensated for. Here are some quite recent instances. In the first quarter of this year, 1,272 pairs of "hussar" boots were returned to the Gubinskaya shoe factory; 1,600 pairs of shoes for school-age children were returned to the Saratov factory; and nearly 400 pairs of defective baby shoes were sent back to the Tbilisi factory. No replacements were sent by these factories, meaning that there were several thousand fewer pairs of shoes on the counters.



In addition, the effectiveness of fires is lowered by the regular lifting of them from enterprises both at the end of the year and for individual quarters. So it turns out that it is important for the enterprise to fulfill its volume plan, and not its plan for supplying every customer.

Unsaleable goods amounting to tens of millions of rubles have piled up in the enterprises of the Kuybyshevskaya Oblast administration of trade. These include faded woolen materials, clothing and underwear, headwear and out-of-style leather footwear. These can be sold at best only after being significantly marked down. Such losses can be eliminated only by raising the quality of consumer goods and by improving the mechanism of mutual responsibility of industry and trade. These reserves for satisfying consumer demand and for sharply curtailing the shortage of certain products do not require capital outlays. And they must be exploited with maximum effectiveness.

#### Belorussian Trade Ministry Reorganized

Minsk SOVETSKAYA BELORUSSIYA in Russian 26 May 79 p 1

[Text] With every passing year the supplies and machinery base of the [Belorussian] republic's trade is strengthened and expanded. Spacious, modern self-service department stores, large specialized stores, and department stores are being built. And customers are lucky if they can find what they need in them, down to the smallest "trifle" that may have no effect on goods turnover, but can at times have a real effect on our nerves. A customer will come out of the store saying "They've got everything except what I need." This means we have not attained the ultimate goal of the commercial process, namely to satisfy the needs of Soviet man. It means there has been a breakdown in the production trade mechanism at some level. And no matter how superficially satisfactory are the indexes that describe the work of individual trade enterprises and the system as a whole, unsatisfied demand, on the one hand, and the stacks piled up in warehouse enterprises of products not meeting with the public's approval, on the other, can destroy the good that has been accumulated in this sphere of life that is important for every one of us.

V. I. Lenin called upon communists to learn how to trade. Under contemporary conditions that means first of all to repudiate old, routine forms of work, to always be searching, suggesting and incorporating ideas, seeking new variations for organizing the process of trade.

Such work has been underway for some time past in our republic. Recently the republic's Ministry of Trade went over to a new system of administration. What was the reason for this? First of all, the interests of the consumer. The republic's wholesale offices are deserted. As the intermediaries between the enterprises and trade, they drew up the orders for goods, without being concerned whether there was a market for them. They had their own, wholesale plan of trade turnover, after all, that the famous "volume above all" frequently helped them meet. And at the same time the

wholesalers did not bear any real responsibility for seeing that the retail trade plan was fulfilled. Now problems involved in supplying the public with all goods will be dealt with on a system-wide basis directly at the ministry and its administrations.

This revamping will be effective if it is accompanied by the further concentration and specialization of trade, the improvement of its ties with industries producing consumer goods, and improvements in consumer research.

A great deal of work in this direction is being done in Minskaya, Brestskaya and Gornenskaya Oblasts. The citizens of Minsk and visitors to the capital are well acquainted with the store "Tekhnika v bytu," where the sale of complex household machines and appliances is concentrated. The customer does not have to ride around the city looking for a refrigerator or a washing machine: He can select the desired model from among those displayed in this large store. The item will be delivered to him from the warehouse or directly from the Minsk refrigerator plant. The result--a significant reduction in transportation expenses and a steep rise in the volume of goods turnover. And most importantly, there is a big saving for the consumer.

Altogether, specialization has been carried out in this republic in more than 84 percent of industrial goods stores. This process is far from being completed. Together with the transition of large stores to trading through consumer complexes, it is the most progressive way of simplifying the administration of the sector and of making it possible to improve the selection of goods.

It must be noted, however, that costs are incurred in this work. In striving to increase the percentage of specialization, in some cities only one narrowly specialized store remains for a whole large new micro-rayon, and people are forced to travel to the center for the most basic necessities.

The clearer the structure of commercial organizations and the better thought out their administration, the more fruitful will be the efforts of both commercial and communal organizations at improving the standards and quality of service. Collectives in our republic have, in their time, been the initiators for introducing a system-wide administration of the quality of trade. This experience received the approval of the union ministry. The most thorough system of administering quality was developed in the Mogilev city food market. The administration and communal organizations managed to enlist the efforts of literally every worker in the fight to improve trade service. One of the things that greatly contributed to this was the revamping of the cumbersome system of administering grocery stores that had developed in Mogilev and the creation of compact, mobile associations.

However, actual experience in using system-wide quality control and its component part, a system of error-free work, shows that the innovation is far from being used everywhere as it should be. There are places where vital, creative work is replaced by pen-pushing, by the mindless compilation of various reports. This was how they reacted to the innovation in Bobruysk, for example. And it is from precisely this city that a large number of complaints about poor trade service originate. It is obvious that formalism will only harm our efforts. Local party and soviet organs must more persistently undertake to inculcate new, progressive forms of insuring the quality of service.

Decisive work is being conducted in the republic on mechanizing labor-intensive processes in commercial enterprises on shifting stores and bases to container shipment. The development of some types of containers, however, has clearly dragged, and the number of those that have seen the light of day is still a small fraction of those needed by the commercial sector. A large share of the blame for this lies with the industrial ministries. It is the duty of the party organizations at the work sites to monitor problems involved in mechanizing human labor in stores and warehouses, in introducing packing equipment to lighten the work of the salespeople.

Much remains for the workers in trade to do to improve forms of service, in particular for preliminary orders and deliveries to the home of the ill and the elderly. The spectrum of supplementary services offered in stores must be significantly broadened. Advertising deserves greater attention. Now it still pays greater attention to finding a market for shoddy goods than to promoting new ones.

As was noted at the 25th Komsomol Congress by L. I. Brezhnev, improving trade services is an essential task of the day. There can be no gaps here, because if a single link is lacking, the prestige of the commercial sector as a whole can be injured. A systematic, practical approach to the solution of the problems facing the sector is required. And the experience of the best collectives indicates that precisely in this we can count on success.

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MANPOWER: LABOR, EDUCATION, DEMOGRAPHY

OFFICIAL ANSWERS QUESTIONS ON LABOR AND WAGES

Moscow TRUD in Russian 15 May 79 p 2

[Letters from readers and replies by V. G. Lomonosov, chairman of the USSR State Committee on Labor and Social Problems: "Labor and Wages"]

[Text] [Letters] Whatever plant you go to, you hear talk about the labor shortage. This is sometimes used as an excuse for overtime work and for shock work. I would like to know if there really is a manpower shortage or if this is simply a convenient way of covering up administrative inability with the semblance of a serious problem.

Hero of Socialist Labor B. Dzhurayeva, spinner at a textile combine (Tashkent)

We introduce new techniques and struggle to increase labor productivity, but we simultaneously have to put up with idling and unauthorized absences. How many valuable hours are lost in this way?

Hero of Socialist Labor V. Klimenko, steelworker at the Plant imeni Il'ich (Zhdanov)

[Answer] The questions asked by B. Dzhurayeva and V. Klimenko are closely interrelated. Let us take a look at the situation. In some cases, the labor shortage is the result of shortcomings in the use of labor resources and the inability to find reserves for increased labor productivity. In 1972, 13.8 percent of all industrial enterprises did not fulfill the plan for labor productivity growth, as a result of which the national economy was short production valued at 2.6 billion rubles. The losses resulting just from idle time, unauthorized absences and absences authorized by the administration average around 1.7 days a year per worker in industry, and the figure even reaches 2.7 days in construction. Moreover, these are only the recorded losses, while actual losses, as inspections at several enterprises have shown, reach much higher levels--sometimes up to 10-15 percent of total working time.

At the same time, we must remember that in some regions, particularly those in which massive construction is going on, new enterprises are being opened.

production volumes are being considerably augmented, and there has been some difficulty in providing these regions with sufficient manpower. According to predictions, the rate of increase in labor resources will slow down in the future. This will call for a further rise in productivity levels and the all-round intensification of production, which has been quite definitely stressed in statements at the 25th party congress and subsequent plenums of the CPSU Central Committee by Comrade L. I. Brezhnev, general secretary of the CPSU Central Committee and chairman of the Presidium of the USSR Supreme Soviet.

A great deal of positive experience has been accumulated in the national economy with respect to the augmentation of labor productivity and the more intelligent and effective use of labor resources. The system used at the Volga Motor Vehicle Plant, which makes it possible to achieve projected capacity in the shortest possible time, has proved quite effective. The training of personnel to perform more than one job is being widely practiced at many enterprises. Collective forms of organization and wages based on final results are being introduced. Work performed according to the method of the Sibirskino Azot Association also results in a substantial manpower savings. Unfortunately, it must be said that progressive methods of labor organization and wages are not being used extensively enough as yet. Ministries and departments should envisage the more intensive use of progressive work methods in the plans for associations and enterprises.

In the struggle to reinforce labor discipline, it is effective to make violations known, to reprimand violators at general meetings and to deprive them of all or part of their bonuses and other compensation. The vacations of those who violate regulations on the job are moved to the winter season and their names are moved to a lower slot on the waiting list for housing. But the main thing is to organize labor in such a way that undisciplined elements will be excluded from the work. As an example, we could cite the enterprises and associations of the Ministry of Instrument Making, Automation Equipment and Control Systems. Stricter cost accounting gave the workers more material incentive and responsibility to fulfill production assignments, increase labor efficiency and reinforce labor discipline. The level of mass indoctrinational work in collectives has risen and mentors play a very important role in the indoctrination of youth. As a result, losses of working time throughout the ministry have been reduced by 10 percent during the last 3 years and the rate of personnel turnover has decreased substantially.

In conclusion, I would like to say that workers and employees must not be taken away from their jobs during the working day to participate in various kinds of public meetings, conferences and sports competitions, which, unfortunately, still takes place. Sometimes workers must be absent from work, with the permission of the administration, for several hours or even for an entire day due to the fact that consumer service establishments and the agencies where they must require some kind of information or documents are only open during the daytime, and only on weekdays. The business hours of these establishments should be changed so that they will be open at times



convenient for the population. In this connection, we should recall that when the new wage conditions were established for workers in trade and public services, special compensation was envisaged for the division of the work shift into two halves separated by an interval of more than 2 hours in length.

[Letter] I am a longshoreman. Most of my colleagues are old. There are almost no young ones. Young people feel that this profession is obsolete and unprestigious. But who will do this work when the old ones retire?

V. Yakovlev, longshoreman at the Teplokontrol' Production Association (Kazan')

[Answer] The mechanization of manual labor is one of the chief ways of increasing production efficiency. It not only raises productivity levels, but also simplifies the work and makes it more interesting and meaningful. This important national economic objective is always given priority by the party and government.

Much has been done toward its attainment in recent years. According to statistics, between 1966 and 1977 alone, the power-worker ratio in industry increased almost 1.7-fold, the quantity of automatic lines increased 3.4-fold, and the number of mechanized flowlines increased 2.9-fold. In those places where this work has been given the necessary attention, the proportional amount of heavy physical labor has decreased considerably. For example, in Zaporozhskaya and Chelyabinskaya oblasts and the Latvian SSR, the consistent implementation of comprehensive plans for the mechanization of labor with the use of personal resources for this purpose has sharply reduced the need for manual labor. Unfortunately, the level of mechanization is seriously low in some branches.

And now a word about longshoremen. Comprehensively mechanized loading operations involving portal, overhead traveling, railway and other types of cranes, electric-, vehicle- and tractor-powered lifts, conveyors and loaders and other machines are already being widely used at maritime and railway transport enterprises. This has made it possible to form comprehensive brigades made up of workers who are able to operate the different types of loading machinery. As a result, the traditional profession of "longshoreman" has completely disappeared, for example, in materials handling operations at seaports. It has been replaced by a new type of skilled and diversified labor--the labor of the "dockyard machine operator."

V. Yakovlev is correct in saying that it is now difficult to find young people who want to work as longshoremen. But the new system of materials handling operations is already being used at river, fishing and lumber ports, at railroad stations and at enterprises of several other ministries and departments. And comprehensive brigades to perform this work with the aid of mechanized means could be formed by enterprises and organizations in all branches.

[Letter] Last year a large silica brick plant was opened in Berezniki. But the enterprise has been in debt since the first day. Of the 33 million bricks it was supposed to produce in 6 months, around 20 million are lacking. And this is all due to the fact that there is almost no one to work at the plant: One out of every three work positions is vacant. How did this happen? How could they make the plans for the plant and decide to build it in our city without giving any thought to who would be working in its shops?

L. Trefilova, bricklayer (Berezniki, Permskaya Oblast)

[Answer] A tremendous amount of industrial construction is going on in our country. Huge sums are being spent on this, and it is extremely important that each ruble invested in industrial development produce a return as quickly as possible. But there are still frequent cases in which new production facilities take a long time to incorporate, as a result of which the national economy is not provided with all of the products specified in plan assignments. There are many reasons for this, and one of them is a personnel shortage. Suffice it to say that approximately one-fourth of all the enterprises which were unable to incorporate production facilities during the first 6 months of 1978 were experiencing manpower difficulties. This occurs because there are often delays in the construction of vocational and technical institutes, residential buildings and pre-school establishments in the environs of new plants. Ministries and departments do not always give the necessary attention to the training of skilled personnel on the new construction sites.

Labor agencies made a special inspection of the state of affairs at the Berezniki Silica Brick Plant. The plant is outfitted with modern equipment of Polish manufacture. But nothing was done in advance to train personnel for the plant. The plant is mainly being staffed by hiring temporarily unemployed members of the local population. It is not surprising that there are not enough skilled workers at the plant: Only 35 graduates of vocational and technical schools and 9 young specialists came to work there during the year. The rate of personnel turnover is quite high. This is mainly due to the lack of housing and child-care facilities. Now the RSFSR Ministry of the Construction Materials Industry has taken some steps--in particular, the construction of a residential building is planned for 1979. We hope that the ministry will do everything necessary to provide the new plant with personnel.

[Letter] For several years I was a seamstress in an industrial combine. But now I have a child and I cannot leave the house for 8 or 10 hours a day. There is no one to leave the child with. But not working at all is also difficult for me: I need the wages, and I am accustomed to being part of a collective. I would like to work at home, but I do not know how to do this.

N. Karvi'skaya (Kaluga)

[Answer] The "Basic Guidelines for National Economic Development in the USSR in 1976-1980" envisage the establishment of broader opportunities for women with children to work at home. Many cities already have enterprises which employ individuals who do their work in the home. Ministries and departments and the ispolkoms of soviets of people's deputies must work harder on the establishment of production units of this kind.

As for the author of this letter, I would like to report that N. Kapyl'skaya is already sewing at home for the Kaluzhanka Clothing Association.

[Letter] We have shops where the state plans are not fulfilled for months while the majority of workers in these shops are not only fulfilling norms, but even overfulfilling them. There must be something wrong with the norming procedure if it is easy to fulfill the norms but the plan remains unfulfilled.

V. Smyshlyayev, electrician at the plant for rubber technical items (Sverdlovsk)

[Answer] It is a fact that differences between the fulfillment indicators for labor norms and production plans exist at the majority of enterprises. This is due to the practice of setting norms for a specific job, with consideration for its complexity on the basis of standard, branch or other progressive labor expenditure norms. The norm stays the same for a particular job, even though the capabilities of workers on this job differ, just as their qualifications, production skills and work attitudes differ. Plan assignments for production volume and labor productivity are a different matter. As a rule, they are higher than output norms and are therefore aimed at a continuous rise in labor productivity levels, and this calls for the elaboration and implementation of the necessary organizational and technical measures, the establishment of favorable working conditions, the dissemination of progressive experience and the systematic provision of workers with advanced training.

At some enterprises, however, the differences between norm and production plan fulfillment are unjustifiably great. As a rule, this is the result of output norms that are too low (usually experimental statistical norms), which impedes labor productivity growth and hampers the fulfillment of plan assignments.

The plan for production volume and labor productivity at the Sverdlovsk Rubber Technical Items Plant, where V. Smyshlyayev is employed, was not fulfilled last year. One of the reasons was insufficient work to reduce the labor-intensiveness of production. If the rate of increase in labor productivity is to be accelerated, it will be necessary to consistently replace understated experimental statistical norms with technically sound norms, particularly with the aid of intersectorial and sectorial labor expenditure norms, which will indisputably contribute to the successful fulfillment of production assignments.

[Letter] I am a clerk in a bookstore. I love my job but it is too bad that this important work pays so little. When will our wages be increased?

A. Artemova, senior salesclerk in a bookstore (Rashkovo, Moldavian SSR)

[Answer] According to the plan for economic and social development, in 1979 there will be rise in the wages and salaries of middle-income workers in trade, public utilities, education, public health, culture and other non-production branches in all parts of the nation, including Moldavia. Bookstore clerks will be given a sizeable raise--the monthly wage of a senior clerk, for example, will be raised 43 percent, from 77 rubles to 110. The wages of other workers in non-production branches will also increase--drug-gists, cultural organizers, procedural experts in extracurricular institutions, and movie technicians. In all, 18 million workers and employees will be given a raise in 1979.

[Letter] I work as an electrician at a plant, my wife is a nurse, and my mother used to work on a kolkhoz but is now employed as a janitress by a house management committee. She will reach retirement age this year. My son goes in kindergarten and will start school in the fall. Now we are expecting another child. Tell us, please, what is being done to elevate the financial status of families like ours.

B. Petreykov (Baranovich, Belorussian SSR)

[Answer] In short, much is being done. For example, new wage conditions for workers and employees in the production branches were instituted in the Ninth Five-Year Plan. The new rates went into effect in Belorussia at the end of 1975, as a result of which the wages of industrial workers rose substantially. The wages of electrician-repairmen rose 20 rubles a month on the average. In 1979, as I have already noted, new wage and salary rates will go into effect for workers in the non-production branches, including nursing. The average increase in nursing salaries will be 23 percent. Therefore, your wife's salary will increase also. In January 1980, pensions will be instituted for former kolkhoz members with the necessary term of service in kolkhozes or sovkhozes and at state and other enterprises, organizations or establishments. Your mother will also be given a pension.

The son of B. Petreykov goes to kindergarten. I will remind you that the state is paying approximately 80 percent of all the cost of keeping and educating children in pre-school institutions, while the parents pay only 20 percent. When the child goes to school, he will be issued free textbooks. The fee for first-grade textbooks has already been cancelled, this year textbooks for the second and third grades will be issued free, and by 1983 the fees for textbooks for all grades in the general educational school will be cancelled. I will also remind you that a few years ago 100-percent free pre-natal and obstetric care was granted to all women, regardless of their term of work service, and free hospital care for sick children was extended from 3 days to 7.

Various measures are being taken in our country to contribute to a rise in the welfare of all segments of the population. As a result, dramatic qualitative changes are taking place in family income. Whereas only 4 percent of the nation's families had a per capita income of more than 100 rubles a month in 1965, the figure was almost 40 percent in 1977, and by the end of this five-year plan it will be around 50 percent. We must remember, however, that the rise in living standards depends, and will continue to depend, on success in national economic development, the growth rate of national income and the level of labor productivity--that is, in the final analysis, on the labor contribution of each Soviet individual.

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MANPOWER: LABOR, EDUCATION, DEMOGRAPHY

SHCHEKINO METHOD INCREASES PRODUCTION

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 8 Mar 79 p 1

[Article by A. Shestak, editor of NOVOMOSKOVSKIY KHIMIK: "Greater Production with a Smaller Staff"]

[Text] The Shchekino method is being successfully introduced in the Novomoskovsk production association, Azot, a recipient of orders of Lenin and the Labor Red Banner. As a result of a better organization of labor, the mechanization of labor intensive processes, the combining of professions, and the enlargement of service zones at enterprises, more than 500 people over the past five years have been conditionally released and reassigned to productions and shops which are being opened. Approximately 70,000 rubles in wages have been saved last year alone.

The Shchekino experiment is being used in collectives for the second stage production of ammonia.

A great deal has been done here to turn out more production with a smaller staff. The rational work of specialists is contributing to this to a large degree. For example, a proposal developed by V. Zaytsev and B. Pelyushkin was introduced to improve the system of signaling and measuring of the pressure of gas in front of burners. A. Tukina found a method to prevent the formation of an explosive mixture in thermostats. This work is some of the best not only in the ship, but also in the entire Azot association. And last year alone more than 50 rational proposals have been adopted which have saved more than 600,000 rubles.

From the very start of production, specialists "zeroed in" on the central control panel. It was precisely in its facilities that there were resources not utilized. According to the preliminary design, it was

determined that the automatic control of the primary processes would be implemented from there, and remote assemblies would be controlled at their locations. Of course, it is good that the receipt of gas, its purification, and synthesis is controlled from a central panel. But what about accessory, auxiliary processes? Why should their operation be moved out here?

A. Povezhniy, a shift chief, came to the northern Donetsk association, Azot, and observed how work was carried out there. And soon all the specialists were included in the work. An additional panel was installed on the central panel where they took control of the absorption installations. And the work of the instrument operators became much simpler. Now, thanks to the introduction of the automatic control, a single person successfully copes with the work where earlier two people worked at each installation.

A movement toward the mastering of related processes has been widely developed here as well. The task was undertaken to qualify all operators with universal skills, and currently more than half of the workers can successfully cope with jobs at two-three work centers. Georgiy Aifer'yev has mastered the duties of oil reforming operator and monoethanethiolamin purification operator. The same may be said of V. Bolonov, A. Mamayev, and many others. In this way, production output is intensified, not by the numbers of those working, but by means of their skill.

Experience. Skill. Maturity. The overwhelming majority of workers have acquired these qualities. Those who have gone through the school of labor here are sent once again to enterprise facilities which are being built. Moreover, at the fourth level of ammonia production, which is expected to be on line soon, the backbone of the future operators is directly composed of representatives of Ammonia Production-2. S. Puzanov and A. Bezrukov came here to work as shift chiefs and A. Druyanov and N. Paspolov as operators and senior operators.

People are leaving Ammonia-2, and no one is being hired in their place. But production output grows from year to year, from month to month.

"The Shubekina method is helping us," says B. Chistyakov, secretary of the city party bureau. "All the production increases we have enjoyed are a result of a growth in labor productivity."

Production capacities are growing. Ammonia output is planned to soon reach 450,000 tons. When one considers that the design capacity of the first similar complex in the Soviet Union which was supplied with domestic equipment is considerably lower, then the difficulty of the task the ammonia workers faced will become understandable. And owing to what will it be carried out in the future?

The shop is being remodeled. Ammonia-2 specialists, in creative cooperation with scientists from the capital's GIAP (State Scientific Research and Planning Institute of the Nitrogen Industry and Products of Organic Chemistry) and its branch in Sovomorsk, have developed a plan to improve the remote equipment assemblies, making them automatic. During capital repairs, "cuts" were made in operating equipment, and additional transformers, electric motors, and other equipment were installed. The preliminary design was modified in operation. All the work was planned to be conducted without additional stoppages of machinery except for capital repairs. The ammonia workers remain true to their slogan: "Greater Production with a Smaller Staff of Workers."

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MANPOWER: LABOR, EDUCATION, DEMOGRAPHY

RUSSIAN LANGUAGE AS COMMON BOND OF ALL SOVIET PEOPLE

Moscow UCHITEL'SKAYA GAZETA in Russian 15 May 79 p 1

[Article: "The Language of Cooperation of the Peoples of the USSR"]

[Text] The active membership of party and economic organizations are meeting in Keminskiy Rayon. Barun Shershenovna Shershenova, the secretary of the raykom of the Communist Party of Kirghizia is on the rostrum. Listening attentively to her address are leading production workers, managers of kolkhozes and local enterprises, and party, Soviet, trade union, and Komsomol workers. And teachers. Today, teachers and school directors invited to the meeting of the active membership are discussing the teaching of Russian.

"A school is obligated to provide a basic knowledge of a second native language to each Kirghiz boy and girl, which for them is Russian," says the secretary. "This is the demand of the people, the demand of the party."

Teachers and economic managers take the floor. U.O. Grozaliyev, chairman of the Kim-Kemin Kolkhoz gives an address. Qualified workers are needed by economic operations. The secondary school and technical and vocational school is from where the force of educated young mechanics and cattle breeders are drawn. But what kind of qualifications, what kind of perfection is it possible to speak about if a young person has poor command of Russian, the leading language of science and technology. This is a direct reproach to the school.

And when I. T. Bebnev, first secretary of the raykom, sums up the work of the active members, he addresses the communists, --school administrators, secretaries of party organizations, and teachers--calling upon them to be guides of advanced experience and fighters against sluggishness in the solution of such an important social and political task as the arming of Kirghiz youth with an active knowledge of the Russian language. Similar meetings of the active membership of party and economic organizations were held in all rayons, cities, and oblasts of the republic. They were begun with a meeting of the republic's

active members at which T. U. Usubaliyev, first secretary of the CC of the Communist Party of Kirghizia, spoke on the subject, "A Powerful Means of Communist Construction."

A successive system of measures was outlined and is being implemented in Kirghizia to perfect the teaching and study of the Russian language. And not only in this republic. Under the management of the Central Committee of the Communist Party of Uzbekistan and organs of national education, teachers' groups are conducting a great deal of fruitful work in this direction. S. Sh. Shermukhamedov, the republic's minister of education, recently spoke about this in the pages of UCHITEL'SKAYA GAZETA in a conversation with our correspondents.

Impressive scientific and practical conferences were recently held in Azerbaijan, Kazakhstan, and other union and autonomous republics. Methods to perfect the study of Russian by young people of non-Russian nationality were discussed with heated interest at these conferences.

More than 100 nations and nationalities populate our country. They form a single socialistic family, the Soviet people, united by the community of Marxist-Leninist ideology and by the high aims of the building of communism and fraternal friendship, by a unity of thoughts and actions. The Russian language is the language of the fraternity and friendship of the peoples of the USSR. "The rapid growth of international ties and cooperation is leading to an increase in the significance of the Russian language, which has become the language of mutual intercourse of all nationalities and nations in the Soviet Union," said Comrade I. I. Brezhnev. "And all of us..., of course, rejoice that the Russian language has become one of the generally recognized world languages."

V. I. Lenin dreamed that every inhabitant of Russia would have the opportunity to voluntarily, without constraint, learn the great Russian language. Now such an opportunity is presented to everyone. The Leninist national policy of the CPSU, the Soviet system of education, permits the young generation to master Russian along with their native language. Tremendous successes have been achieved. The experience of thousands of teachers who are teaching this subject in national schools is an example of pedagogical art, professional excellence, and a creative approach to their work.

In accordance with the wishes of parents in numerous union and autonomous republics, teaching is begun already at the pre-school age when children are particularly receptive. In Georgia, Uzbekistan, Kazakhstan, Kirghizia, and the majority of autonomous republics of the USSR preparatory classes have been created which help future first-graders more successfully master their school course. Classes offering a thorough study of the Russian language are being held on a large scale for teenagers who are striving to acquire a more basic knowledge. Work outside of class is taking on the most varied forms.



But the undoubted successes cannot hide essential deficiencies which lead to the fact that the school, especially the rural school, at times turns out to be indebted to the people. In a number of cases it does not guarantee the preparation of its pupils to permit them to fluently speak Russian and to freely read Russian political, scientific, and artistic literature. This gives rise to justifiable criticism by parents and by the public at large. There are many causes for this. Numerous programs and textbooks are incomplete and there is a shortage of many teaching materials. But the main and basic cause lies in the miscalculations of a number of teachers, in their weak methodological training and, at times, in their low level of knowledge. The latter is especially true for the teachers of beginning grades at remote rural schools.

There are still many teachers who, in their lessons with children, emphasize memorization of grammatical rules, but not the living Russian language in practice. The programs and textbooks themselves are particularly guilty of this. While teachers are oriented toward the development of the oral and written language of children in Moldavia or Latvia, these skills are not given much attention in the republics of Central Asia.

There are numerous unresolved problems in the preparation of teachers in pedagogical educational institutions. The raising of qualifications in institutes of advanced training is not always sufficiently effectively organized. Experienced teachers look to scientific and research institutions for considerably more help.

The single-minded systematic activity of organs of national education, methodological centers, scientific institutions, institutes of higher learning, and schools is needed to overcome the shortcomings. In this connection, we must proceed from the fact that the teaching of Russian to non-Russian young people is a complex problem. It is a problem of linguistics and pedagogy and of politics and ideology. It is difficult to put too much value on the importance of the unity of education and upbringing. The task of teachers is to instill youth with a "feeling of pride in the socialistic fatherland, of the inviolable fraternal friendship of the peoples of the USSR; with respect for national dignity and national culture; and with the irreconcilability of any manifestation of nationalism." That is a quote from a decree by the CC CPSU "On the Further Improvement of Ideological and Political Education Work "

An all-union conference, "The Russian Language, the Language of Friendship and Cooperation of the Peoples of the USSR," which will be held in the near future in Tashkent, will help to perfect the preparation of non-Russian students and to raise the educational role of a mastery of the Russian language. The conference will undoubtedly help all educational system institutions to achieve a further improvement in the teaching of the Russian language.

MANPOWER: LABOR, EDUCATION, DEMOGRAPHY

FOREIGN STUDENT COMPETITION IN MOSCOW

Moscow TRUD in Russian 24 May 79 p 3

[Article by O. Bondarenko: "'If I Could Learn Russian...'" ]

[Text] The first All-Union Olympiad for foreign students and vocational and technical students studying in the USSR took place in the course of a week in Moscow.

"We're really speaking about the third and final round," specifies Assistant Professor Nina Stepanovna Vlasova, olympiad jury chairman. "For we could not have put everyone who wanted to participate under one roof."

She does not exaggerate, since currently more than 70,000 young men and women from all five of the planet's continents are studying in the USSR. They are enrolled in 500 higher and secondary specialized educational institutions located in 50 cities of the Soviet Union. Therefore, the first stage of the olympiad was held right at the corresponding higher educational institutions and technical schools and the second at the general city level. And 272 people, representing 59 countries and 185 educational institutions in the USSR, arrived in Moscow to participate in the final round.

Two elements made up the third round, a competition for the best composition and a competitive quiz on the topic, "Do you know the Soviet Union?" Nearly all participants in the olympiad coped with this task, displaying not only a profound knowledge of the Russian language, but also a love for the Soviet people, their history, literature, science, and culture.

The jury recognized as winners 52 olympiad participants from 35 states. Winners included students from fraternal Vietnam and distant Uruguay, Cuba and Poland, Czechoslovakia and Afghanistan, Mongolia and Visayan Guiana. All were presented with badges of honor, diplomas, and memorial presents.

MANPOWER: LABOR, EDUCATION, DEMOGRAPHY

RUSSIAN LANGUAGE TEACHING METHODS STRESSED

Moscow UCHITEL'SKAYA GAZETA in Russian 19 May 79 p 2

[Article by L. Shelyakhovskaya, assistant professor of the department of the Russian language of the Kazakh Pedagogical Institute imeni Abay and candidate of philological sciences: "'If I Could Learn Russian...'"]

[Text] A republic scientific and practical conference on improving the study and teaching of the Russian language in the Kazakh SSR was held recently in Alma-Ata. Taking part in the conference were teachers from schools, trade schools, higher educational institutions, and technical schools; and scientists and representatives from public organizations.

It was noted at the conference that more significance is being attached in the republic to the perfection of the teaching of Russian. More and more attention is being given to the introduction of new methods and technical approaches to training. There are Russian language study rooms in many schools. Groups, clubs of international friendship, thematic evening and morning gatherings, quizzes, contests, and other forms of work outside of class and outside of school contribute to the successful mastering of the subject.

Workers at pre-school institutions are also searching for more rational methods to teach Russian to small children. Educators are utilizing the most effective forms: conversations, games, hikes, trips, and morning parties. By the first grade the children know the necessary basic words and are able to carry on simple dialogues. But, unfortunately, active work with the Russian language is not carried on in all pre-school institutions. That is why the republic's linguists and educators face the task of creating a Russian language program for kindergartens and preparing the necessary educational and methodological materials. Of no less importance is supplying pre-school institutions and preparatory grades with qualified personnel.

The primary school faces complex tasks. Frequently the teachers themselves in remote and poorly equipped schools have a weak grasp of

Russian. The time has come to prepare philologists for the beginning grades at specialized departments and divisions of pedagogical institutes.

Modern teaching of this subject is inconceivable without the technical means of instruction. These are being used effectively in the Alma-Ata schools. For example, coded slides for lexical and practical lessons in Russian are widely used in the Pavlodarsk Pedagogical Institute, and an algorithmic scheme is used in the Semipalatinsk Institute. But they have their problems there as well. There are small amounts of slides for the Kazakh schools, and there are no educational films with a simple vocabulary. There is not enough methodological literature on the utilization of technical equipment.

Many speakers spoke about the necessity to improve the preparation of teachers of Russian, and pedagogical institutes need to do more in this regard.

Media for mass information are coming to the aid of philologists. A television program entitled, "If I could learn Russian...", has been shown in Kazakhstan for three years now. It is produced by well-known linguists and teachers of Russian language and literature. "The Club of Lovers of the Russian Word" airs on Kazakh television. Beginning in January, Kazakh radio began a regular program entitled "Russian Language, the Language of Peace and Friendship."

It was emphasized in reports and addresses that, with the help of the Russian language, Kazakh people are contributing to the storehouse of world culture. The Russian language is contributing to a solution to tasks of social and economic development and to the further strengthening of the friendship and brotherhood of Soviet people of various nations and nationalities.

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## TRANSPORTATION

### SHORTCOMINGS IN TRANSPORT PLANNING DISCUSSED

Moscow PLANOVYE KHOZYAYSTVO in Russian 5 May 79 pp 60-68

[Article by V. Kozin, Director of IKTP [Institute of General Transportation Problems] under the USSR Gosplan, Dr Engineering Sciences, and A. Mitaishvili, Deputy Director of IKTP, Dr Economic Sciences: "Improving the Planning of the Development of Transportation"\*]

[Text] Nowadays, in connection with the development of economic connections and the expansion of the process of coproduction, specialization and concentration of production, the functions of transportation in the national economy have become markedly more complicated.

At the November (1978) CPSU Central Committee Plenum L. I. Brezhnev particularly emphasized the role of transportation and viewed it as a key branch of the economy. This year the capital outlays allocated for the development of transportation are higher than envisaged in the Five-Year Plan.

In the field of transportation radical changes have taken place in the age of Soviet rule: transportation has become a powerful stimulant of the development of social production. In 1978 the extent of the overall network of all kinds of transportation routes reached 2.6 million km. The network of public and non-public railroads during this period has more than doubled. The extent of well-built motor highways at present exceeds 700,000 km (compared with 37,000 km in 1913). The overall extent of the newly created pipeline network (including gas pipelines) was nearly 170,000 km in 1973. Air transportation arose and has become a major branch. The extent of civil air routes in 1977 was about 896,000 km. Under Soviet rule more than R 148 billion in capital outlays has been invested in the development of transportation, of which about R 55 billion in the development of the railroads. Public transportation at present accounts for more than 16 percent of the fixed productive capital of the national economy.

A characteristic feature and principal approach to the development of transportation in this country is the expansion of the trunk transportation routes

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\*In order of discussion



in general and of the railroad routes in particular. Emphasis has been placed on constructing trunk railroad lines capable of conveying a huge volume of freight in the principal destination directions. Parallel to railroad construction the construction of modern high-capacity petroleum and petroleum products' and gas pipelines as well as of motor highways has been developed.

The growth of the transport potential (along with the expansion of trunk routes) has been assured through the implementation of large-scale construction of seaports and riverports, railroad stations and hubs, access tracks of industrial enterprises, airports and other elements of transport infrastructure.

At the same time a veritable scientific and technological revolution has been taking in this country as regards transport facilities. This revolution has resulted in the electrification of more than 30 percent of the trunk railroad routes and the dieselization of an additional 69.9 percent. These two progressive types of traction accounted for 99.9 percent of the total national railroad freight turnover in 1977. Automatic interlocking systems and centralized traffic control systems have become widespread. Rolling stock has been complemented with up-to-date types of powerful and economical locomotives, trailer tractors, marine and river ships, automobiles, buses, and aircraft.

Between 1917 and 1977 freight volume on all types of transportation has increased by a factor of more than 67 times and reached in 1977 5.5 trillion ton-kilometers, while passenger traffic increased by a factor of 35 (exclusive of the conveyance of passenger by electrified urban transit services) and reached more than 810 billion passenger-kilometers.

However, although under Soviet rule the nation's transport system has made a tremendous leap forward in its development and now occupies a leading place in the world's transport system, in recent years it has not been completely satisfying the demand for transportation so that it operates under a strain. This affects adversely the rate and scale of the rise in the effectiveness of social production and of the mobilization of the resources of the distant northern and northeastern regions of the country.

One reason for this situation in the transport system, especially in railroad transport, is the existence of various shortcomings in the organization and technology of the transport process, which manifests itself in a decline in the indexes of the efficiency of utilization of the available means of transportation. Thus the index of mean rolling-stock turnover on the nation's railroad has declined by nearly 20 percent in the last 10 years. Shortcomings in the organization of locomotive fleet operations have resulted in the failure to reduce the labor requirement and maintenance cost of locomotives during the Ninth Five-Year Plan and during the first 2 years of the 10th. The increase in locomotive-section power also has not produced the expected results. The lag in improvements of equipment, and principally of diesels and electric traction engines, has resulted in an increase in the demurrage of locomotives owing to the need for additional preventive maintenance.

The shortcomings in the organization of rolling stock operations, and particularly in the operation of locomotives and in the promptness of their repair are a factor in their breakdown.

Infractions of technological discipline result in upsetting the train-formation and dispatching schedules. The volume of the processing of rolling stock at stations has markedly increased.

Shortcomings in the distribution of operations among marshalling yards, failure to observe the train-formation schedules, and the relaxation of supervision over the fulfillment of technological discipline and over the responsibility of workers for effective utilization of the available resources have greatly reduced the transport capacity of the railroads. Calculations show that 87 percent of the total loss in transport capacity of the railroads due to delays in rolling-stock turnover during the 1976-1977 period was occasioned by the deterioration in maintenance indexes.

The difficulties in the transport servicing of the national economy along with oversights in the performance of the administrative transport agencies are also associated with shortcomings in transport planning, as has been mentioned by L. I. Brezhnev in his speech at a conference with the first secretaries of the kray koms and obkoms in the Far East. The problems of planned regulation of the proportions in the development of transport are not being solved completely satisfactorily. The adopted system of plan indexes, precludes the possibility of balancing the transport plan with the plans of production and distribution.

The traditional system of planning the intra-branch proportions of transport does not make sufficient allowance for the special features of transport, for its geographic aspects and for the attendant need to develop the technological reserve needed to assure the mobility and maneuverability of transport.

These and other shortcomings have largely resulted in a disruption in the proportions of development between production and transport. In the past this has taken place owing to a number of factors (inadequate capital investments, underdevelopment of capacities of the organizations implementing transport construction, insufficiency of the rolling stock, especially railroad rolling stock, supplied to the transport system).

The disruption of proportions in development between transport and the other branches of the national economy is clearly revealed by a comparison of the growth rates of: the capital investments allocated for the development of transport and of the other branches of the national economy; productive capital; gross national product; and the freight volume, and carrying capacity of the transport system. Thus while the gross national product increased 2.75 times in 1977 compared with 1960, and 1.47 times compared with 1970, the volume of freight turnover on all types of transportation increased 3 and 1.5 times, respectively during the same periods. This trend persists in the 10th Five-Year Plan which stipulates a rise of 34 percent in output compared with a rise of more than 38 percent in freight volume by the year 1980, when it should reach 7.4 trillion ton-kilometers against 5.5 trillion in 1975.

The development of transport has been adversely affected by the failure to adequately consider the geographical shifts in production, especially in that of the extracting industry in the nation's eastern regions, when planning the development of the supply and equipment base of the transport system as well as of the volume of freight, since these shifts have resulted in a marked increase in the mean distance of hauls of freight, particularly of fuel.

During the Ninth Five-Year Plan the gap between the geographic distribution of the processing and extracting industries has somewhat widened, thus resulting in longer distances for hauling fuel, raw materials and finished products.

The proportion of the extracting industries in the nation's eastern region has risen from 35 percent in 1970 to 40 percent in 1975 while the proportion of the processing industry has risen insignificantly there. Conversely, in the European USSR the proportion of extracting industries dropped from 57 to 52.5 percent, while the proportion of processing industries in that part of the country has remained as high. This has caused a sharp increase in the east-to-west flow of freight, particularly of fuel and raw materials. In 1977 the volume of hauls increased 4.9 times compared with 1960 and 2.5 times compared with 1970. Such trends will, judging from preliminary forecasts, persist in the long run, which confronts transport with new and extremely complex problems.

The marked lag in the growth rate of transport compared with other branches of the national economy has resulted in disproportions in the development of individual types of transportation.

During the 1940-1977 period the productive capital of transport has increased 11.5 times compared with an increase of more than 14 times in the productive capital of the national economy as a whole. As a result, the proportion of transport in the basic productive capital and in capital investments has markedly decreased, as seen from the figures in Table 1.

As a result also, the growth rate of freight turnover in the last two five-year periods has exceeded the growth rate of transport capacity. In railroad transport the increase in transport capacity during the Eighth and Ninth Five-Year Plan periods has been below the increase in the volume of freight and passenger traffic, as shown in Table 2.

At present the potential for augmenting the transport capacity of the railroads by increasing the weight of trains is limited. A further increase in train weight requires a radical modernization of the rolling stock pool and a sharp intensification of track operations. Hence in the long run coping with the greater part of the increase in traffic will require the construction of new lines and second tracks necessitating substantial capital investments.

Table 1 (in percent)

	1940	1950	1960	1965	1970	1975	1977
Share of transport* in productive capital	32.2	30.0	29.1	21.7	20.8	20.0**	18.1
Of which: Share of railroad transport	-	-	21.9	13.0	10.9	9.1	9.0
Share of transport* in capital investments	16.9	11.4	8.1	9.0	8.7	10.1	10.0
Of which: Share of railroad transport	10.7	7.8	4.0	3.3	2.7	2.6	2.6

\*All types of transportation as per classification of the USSR Gosplan.

\*\*Including public transportation, 16 percent.

Table 2 (in billions of ton-kilometers)

Index	1961-1965	1966-1970	1971-1975
Increase in:			
Adjusted freight volume	600.0	860.5	977.0
Transport capacity of railroads	733.0	686.0	977.0
Of which:			
Increase in weight of freight trains	216.0	246.0	230.0
Automatic interlocking	248.0	249.0	365.0
Railroad electrification	170.0	126.0	57.0
Transport capacity of second tracks and new lines	99.0	65.0	171.0

The geographic shifts taking place in production in recent years have resulted in a marked increase in the average distance of haul per ton of freight, particularly as regards fuel-industry freight, and in a correspondingly high growth rate of freight turnover.

The mean distance of haul of fuel-industry freight has increased from 734 km in 1960 to 839 in 1970 and 1152 in 1977. The 10th Five-Year Plan envisages a mean distance of haul of such freight reaching 1243 km in 1980. The mean distance of haul of raw and building materials has correspondingly increased from 580 km in 1960 to 620 in 1977. The causes of the growth in mean distances of hauls are objective phenomena, namely, the development of production in the nation's eastern regions, the expansion of specialization and cooperation of production, the establishment of production associations in industry, and interbranch cooperation and agroindustrial integration in agriculture. All these factors produce a substantial economic effect which, as a rule, more than offsets the expenditures on increasing freight-handling operations, and from this viewpoint the increase in the mean distance of hauls is economically justified.

This does not mean that measures should not be taken to reduce the mean distance of hauls, but this should not become an end in itself to be attained at any price. Reducing the distance of hauls may be profitable to the transport system, but it is not always helpful to the national economy as a whole. Unfortunately, this is not always adequately considered when planning and establishing the relations between the transport system and the economy as a whole.

Yet the comprehensive nature for planning the development of branches of the national economy, which is indispensable for assuring proper proportions of that development, should allow for the special features of the effect of various factors in production and consumption on the economic effectiveness of social production. Unfortunately, failure to allow in planning for such features of the geographic distribution of production and consumption and for the ensuing scale of development of the nation's transportation system has resulted in a definite lag in the development of that system, as mentioned above. This means that the needs to balance production with consumption are increasing.

Long-term planning of the geographic distribution of productive forces should completely take into account the complex whole of expenditures on production, transportation and consumption. In particular, there is the expected continuation of the establishment of metallurgical bases in Siberia and Kazakhstan, the construction of new metallurgical enterprises in the European part of the USSR, and the opening of new petroleum refineries, as well as the siting of lumber and plywood processing enterprises chiefly in the nation's eastern regions, etc. Such measures will serve to rationalize transport-economic connections. The improvements in the geographic distribution of production are demonstrated by the circumstance that in the long run the volume of transport operations per ruble of gross national output will somewhat diminish.

However, shortcomings in the geographic distribution and structure of production resulting in an unjustified increase in transport operations have not been completely eliminated.



Thus as regards the pattern of distribution of ferrous metallurgy, a major shortcoming from the viewpoint of transport is the absence of large-diameter pipe production in the eastern USSR. The construction of the second section of the West Siberian Metallurgical Plant is not designed to completely solve the problem of rationalizing the transport of steel pipe (which is carried from the European part of the USSR and the Urals into the eastern regions on the scale of more than 4 million tons annually, with the average delivery distance amounting to 3,400 km) and, essentially, it removes from the agenda the question of establishing the Tavshet plant inasmuch as the Angara-Ilim iron ore base has been assigned to the West Siberian plant. As a result, East Siberia and the Far East will continue for a long time to be supplied with metal from other regions.

In our opinion, it would be an important step to build a new large plant in the country's center on the basis of the ores of the Kursk Magnetic Anomaly (as a complement to the Novo-Lipetsk Plant now under expansion as well as to the new plant for the direct reduction of iron in the region of Staroye Oskolo) in order to eliminate the shortage of ferrous metals in the Central, Central-Chernozem, Volgo-Vyatka, Northwestern, Baltic Maritime, and Belorussian economic regions. This would reduce the rail freight turnover by an average of 700 ton-kilometers per ton of ferrous metals delivered from the Urals and from the southern USSR (in 1975 these deliveries amounted to 25 million tons).

The development of the raw materials base of ferrous metallurgy requires assuring a reduction in the deliveries of KMA [Kursk Magnetic Anomaly] ores to the metallurgical plants of the Urals, since by 1980 the development of ore extraction in the Kachkanar Basin will result in a rise in deliveries from that basin to 18-19 million tons.

Major shifts are planned in the geographical pattern of oil industry, but as a result of the excessive concentration of petroleum refining in the Ural-Volga regions and of the shortcomings in specialization, the transportation of output to other regions remains a longterm prospect, and over extremely long, economically unjustified distances at that.

In the forest industry in recent years loggers at forest management farms lacking sufficient mechanization and performing selective cutting without a comprehensive utilization of timber account for about 10 percent of all logging operations. Hauls of timber by these loggers are not subject to centralized planning and in many cases are performed inefficiently. This also applies to the planning of the production and distribution of building materials and reinforced-concrete components.

Lumber production in relatively unlogged regions, while expected in the long run to decline compared with its present level, will persist at the level of more than 20 million cu m according to existing projections. In view of the absence of a raw materials base in these regions, they have to be supplied with about 25 million tons of lumber from surplus-timber zones at distances of as much as 2,500-3,000 km.

The gearing of the pulp-and-paper industry toward an increase in the utilization of technological chips is inadequately tied to its production potential in various economic regions of this country. In particular, the demand for technological chips in Karelia, the Arkhangel'skaya, Vologodskaya, Gor'kovskaya, and Permskaya oblasts and Mariyskaya ASSR will not be satisfied by local resources. This will result in increasing the mean distance of haul of these chips by a factor of 1.5 times and hence also in a considerable extra burden on transport.

Special consideration must be given to the rising role of transport in the nation's fuel and power balance. As is known, the greater part of fuel resources is found in the nation's eastern regions: in Siberia, Kazakhstan, Central Asia, and the Far East. But the fuel-consuming branches are mainly located in regions of the European part of the country and in the Urals.

In these regions, the demand for fuel and power resources is not satisfied by local extraction and production. Considerable quantities of fuel have to be brought in from the eastern USSR. It is important to note that the fuel shortage in the European part of the USSR and in the Urals displays a rising longterm trend. In 1975 the transportation of fuel and power freight from the east to the west increased by a factor of 4.6 times compared with 1960 and reached 290 million tons.

In the long run, fuel consumption in the Urals and in the European part of the USSR will markedly increase although the share of the processing industry of these regions in gross national product will gradually diminish. This means that the fuel and power resources of the eastern regions will become an important factor in the growth of industrial production in the European part of the USSR and the Urals, and hence this will result in a tremendous east-to-west flow of fuel and power resources. Transportation--rail, pipeline, or LEP [electrical transmission lines]--will become the foundation for assuring the links between the extractive branches of the East's economy and the processing industry of the European part of the USSR and the Urals.

A number of other instances requiring continued search for solutions more adequately allowing for the transport factor in the planning of the geographical distribution and specialization of production could be cited.

In addition to improvements in the geographical distribution of production, associated with additional capital investments, steps to improve the planning of supply, marketing, and transportation of production are needed with the object of further refining the transport-economic relations in the national economy given the existing geographical distribution of productive forces. In that domain, too, latent useful potential exists.

A more thorough consideration of transport cost when assigning suppliers to users would make it possible in a number of cases to reduce the volume of transport operations. The production of specific types of products should be tailored to the orders of users. A reduction in the volume of transport operation would also be facilitated by the centralization of the distribution

of the output of the lumber and building materials industries, as well as by a large number of other measures.

If transport is to cope with the demand for hauls, well-developed and reliable economic levers are needed. A major role in solving this problem should be played by continuing improvements in the system of plan indexes, which as yet has not been geared to satisfying concrete needs of society for the transportation of the materialized products of labor as well as of passengers.

It is of interest to the national economy that the produced goods be delivered to users in the specified volume and variety. This means the "finished product" of transport is represented by the delivery of products to users in the specified variety and in accordance with the delivery schedules. Hence, the plan of operations of transport should be constructed in a rigorous (if broad) correspondence with the plan of material and technical supplies and the plan of deliveries. In other words, the plan should rigorously specify the nature and amount of goods to be delivered as well as the consignees. However, the existing system of centrally confirmed indexes of long-range and annual plans does not provide for the transportation of freight according to products lists and in tons.

The plan assigns a major role to such indexes as freight and passenger turnovers, which are calculated in ton-kilometers and passenger-kilometers, respectively. Thus, the existing system of transport-plan indexes determines the volume of transport operations rather than the nature of the freight delivered to users. It should be noted that at present the planning of transport turnover is done without the necessary input information. Transport-economic connections are determined only approximately, since in planning practice such instruments as the territorial balances of production and consumption are not worked out. Without them, the determination of rational transport-economic connections in relation to the geographic patterns of production and consumption is impossible. Hence, the planning of transport operations and especially the determination of the transport-economic connections and distances of haul does not assure the necessary balancing of the transport plan with the plan of production and distribution. It should be added that even annual and quarterly plans of hauls are drafted and confirmed by the transport ministries themselves in isolation from the plans of material and technical supplies and delivery plans, without specifying the freight consignees and consignors. That is why the plan of the volume and variety of industrial output is not adequately meshed with the transport plan, and the transport plan itself does not assure the fulfillment of the plans of deliveries, so that unnecessary hauls are incurred.

The yardstick for the fulfillment of the plan of production and distribution is, as is known, the implementation of the delivery plan, and since transport is not assigned concrete targets for transporting freight in kind and according to consignee (according to the freight list), transport is relieved as it were of the responsibility for the implementation of the delivery plan. In transport the yardstick of performance is the volume of operations performed--freight turnover, and the higher the freight turnover is, i.e. the

greater the volume of operations is, the higher the estimation of the performance of transport organizations and enterprises becomes.

The user is interested in the delivery of a specific quantity of freight at a specific time. This means that the plan targets for transport should include such a qualitative index of its performance as the speed of freight deliveries.

Transport should strive to reduce expenditures, all other conditions being equal, on its ton-kilometer work in the course of its implementation of plan indexes.

In our opinion, to assure the balancing of the plans of production, distribution, and exchange, it is necessary to: plan transportation in tons according to a broad products list of freight and according to consignees; and to introduce indexes of loading and unloading with respect to an overall products list of freight in tons as a confirmed plan index. Such a system of consignee-specifying planning may require also revisions in the system for the administration and planning of transport operations. The need to improve the existing transport administration system has been pointed out at the 25th CPSU Congress.

The transport index "adjusted freight and passenger turnover" also needs to be reexamined. It is customarily computed by adding freight turnover in ton-kilometers to passenger turnover in passenger-kilometers with the aid of an adjustment coefficient. For various types of transportation the adjustment coefficients vary markedly. In rail, sea, and river transport one passenger-kilometer is equated with one ton-kilometer; in automotive transport one ton-kilometer is equated with 0.25 of a passenger-kilometer; and in air transport it is equated with only 0.9 of a passenger-kilometer. The thus computed adjusted freight turnover is regarded in the practice of planning and statistics as the principal yardstick for computing the most important economic indexes of transport growth, such as labor productivity, operating cost, unit capital investments, etc. It is believed that the time is ripe for introducing detailed separate planning of freight and passenger hauls.

The quality of the planning of transport growth is negatively affected by the discrepancy between the classification of branches of the national economy, including transport as one of such branches, and the adopted plan system and indexes. The plan of transport growth lacks unified indexes applicable to all types of transportation. Moreover, certain types of transportation are not included at all in the transport plan. Oil and gas pipeline transport, for example, is classified as belonging in the transport branch but planned as part of the oil and gas branches of production. The plan and report indexes with respect to types of transportation are incompatible in view of the differences in the methods for computing them. Thus, the plan indexes of water transport and automotive transport do not allow for track and road maintenance factor into account. Also incompatible are the indexes of labor and wages in view of their marked differences in different types of transportation requiring different manpower resources. This also concerns the operating costs of transport.



Such a labor-consuming process as loading and unloading operations are completely disregarded in the structure and indexes of the transport plan. The shortcomings of the system of transport plan indexes are largely due to the fact that so far economically justified boundaries between transport as a separate branch of the economy serving the sphere of circulation and intra-production transport serving production and constituting its component part have not been delimited. The correct solution of this question has a direct bearing on improvements in planning and on assurance of its comprehensiveness.

Considerable attention is deserved by problems of the planning of technical progress in transport, of improvements in transport structure through the development of new types of transportation and new facilities. Unfortunately, the existing plans lack indexes allowing for technical progress. What is more, the index "capacity activation--transport capacity of principal types of transportation as a whole and along their main routes"--is lacking.

The system of inter-branch material balance sheets for the USSR as a whole is beginning to be fairly widely used in planning, but this still is not enough. Even now it is important to determine which regions will produce and consume particular types of production and what expenditures will be incurred by the national economy on their transportation from production points to consumption points. Hence, territorial balance sheets of production and consumption are extremely necessary.

It appears necessary to use such balance sheets when drafting the plan for 1981-1985. The development of such balance sheets may during the first stage be limited to calculations of the most important products decisive to the absolute magnitude of inter-regional economic connections, as well as calculations of the attendant volume of transport operations and expenditures, since the optimization of the geographical distribution of production is primarily necessary with respect to the key branches of the national economy. Another important problem is improvements in the recording and planning of the transport expenditures of the national economy. The Main Directions for the Development of the USSR National Economy for 1976-1980 provide for reducing transport expenditures as a concrete step assuring an increase in the effectiveness of the nation's production.

Yet the existing system for recording transport expenditures encompasses only public transport and does not include the expenditures on oil and gas pipeline transportation, log-rafting, loading and unloading operations, etc. and hence it does not provide an exact idea of the actual transport expenditures of the national economy. According to the calculations of the Institute of General Transportation Problems under the USSR Gosplan and the TsNII MPS [Central Scientific Research Institute of the Ministry of Railroads], the combined transport expenditures of the national economy amount to approximately R 80 billion, but the existing system of recording takes into account only R 26 billion of that amount, pertaining to the expenditures on public transport, while the remaining expenditures, connected with loading and unloading operations and the transfer of finished products from the sphere of production to the sphere of consumption by means of transportation



belonging to nontransport organizations, as well as the expenditures on pipeline transport, are not taken into account and not planned by the ministries, associations, and enterprises.

The current procedures for calculating production cost do not provide for isolating transport expenditures as a separate costing item. The situation is largely due to the aforementioned absence of planning of freight hauls in kind and according to consignee.

An accurate reflection of the performance of transport as a separate branch in national-economic indexes (gross national product, national income, inter-branch balance of production and distribution of output) in the planning, recording, and reporting of freight hauls requires a breakdown of these hauls into hauls in the sphere of circulation and intra-production (technological) hauls and the separate calculation of expenditures on each.

The organization of the recording and planning of transport expenditures of enterprises, associations, and organizations will serve to actively influence the level of transport expenditures in the national economy and to assure the fulfillment of the tasks of the 25th CPSU Congress for reducing these expenditures.

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## TRANSPORTATION

### EMPTYING OF CARS, SLOW TURN-AROUND TIME, OTHER RAIL PROBLEMS VIEWED

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 15 May 79 p 2

[Article by V. Grigoryuk, instructor in the Transport and Communications Department of the CPSU Central Committee: "Where Railroad Cars Are Being Detained"]

[Text] One of the most complex problems on railway transport up till this time has been the organization of unloading of railroad cars. Remainders of unloaded rolling stock approach 60,000 cars a day. There are many reasons for this. One of them is the discrepancy between the flow of freight arriving and the unloading capacities of the consignees. Some shippers hastily load according to the principle of "as much as can be gotten in." In December of last year, for instance, the monthly norm of pipes arrived at the Kantemirovka, Ostrogozhsk and Povorino stations from the Chelyabinsk-Yuzhnyy [Southern] station over a period of 10 days. And, to be sure, these stations were "snowed under" with an excessive build-up of inventories and cars had to be converted into warehouses on wheels. And, all the while, the division of sales of the pipe-rolling plant and employees of the Chelyabinsk station had displayed "initiative." Railway workers at the Syzran' station and local oil refinery workers rather frequently act in such a manner. They unload the monthly norm of petroleum products at one station over a period of several days. As a result, hundreds of tank cars are detained for a long period of time in anticipation of unloading.

Ideal conditions for delivery would be those where a group of railroad cars is placed after arrival along the unloading fronts without a surplus of cars on the station tracks. When these conditions are violated, the surpluses of railroad cars that are not accommodated on the unloading fronts occupy station tracks and put a clamp on the switching capabilities of the station. Newly arriving railroad cars get mixed up with those that remained from beforehand, switching operations increase and it even happens that cars are not delivered to the free unloading fronts on time.

Where then is the way out of this and how, in practical terms, can one speed up the railroad car turn-around time? In our opinion, one must begin with the

organization of a well-proportioned system of loading on branches and railroads with consideration given to the unloading frontages.

Experience in organizing such loading already exists on a number of branches. Thus, on the Svobodnyy Branch of the Transbaykal RR, calculation tables for the simultaneous receipt of freight to the shipment for consignees of the oblast, as approved by the Amurskiy oblispolkom [executive committee of oblast soviet of workers' deputies] have been functioning since 1974. The tables are compiled on the basis of the contractual terms for work with enterprises in terms of each kind of cargo for each consignee. By means of the calculation tables, the branch of the railroad has ensured loading with consideration given to the unloading frontages of all stations, freight shippers and freight consignees. Continuous supervision over the strict fulfillment of this loading is carried out by goods cashiers at the stations of departure. Managers of stations and employees of the freight division of the branch of the railroad systematically supervise this work. The introduction of this system has enabled the branch of the railroad to improve the organization of unloading of railroad cars from year to year. Their layovers have been reduced by 0.7 hours. The turn-around time for one railroad car has been accelerated by 1.7 hours. The employees of the Karaganda Branch of the Tselinnaya [Virgin Lands] RR have achieved even better results. Layovers of railroad cars during freight operations at stations on the branch were reduced by 1.5 hours last year when compared with 1977, while the turn-around time for a railroad car was speeded up by 0.4 days.

Is it difficult for shippers to organize smooth-flowing shipment of freight?

The experience of many supplier enterprises tells us that there is no particular complication here—it is simply necessary to be concerned about observing supply discipline. In this respect, the experience of the Timlyuyskiy Cement Plant in Buryatiya deserves attention. At this enterprise, each person considers himself responsible for the end results of production and, first and foremost, for an efficient job of filling consumers' orders. A system of accounting and program specifications reflecting the basic directions in work in terms of fulfillment of contractual commitments has been drafted and introduced here: these specifications reflect to whom, when and by what means of transport the cement was shipped, how much of it was released, how much it is still necessary to ship, of what kind and of what brand.

Other suppliers are trying to justify breakdowns in contractual commitments by the fact that they are poorly supplied with railroad cars and, at the same time, they load the cars that have been delivered without observing these commitments. As a result, for one consignee it's thick with cars at unloading, while for another it is empty. When shipments are bunched together, railroad cars lie idle for a long time and there are simply not enough of them to ensure shipment of production in a manner conforming to the plan, although there are sufficient means of shipment on railroads in order to provide in the main for fulfillment of the plan. This means that the matter is one of utilizing the means of shipment efficiently.

The past year did not bring any improvement in this work for the network as a whole. The average layover of a railroad car during one freight operation increased by 0.4 hour over 1977, while the turn-around time of a railroad car was slowed down by 2.6 hours.

A great obstacle on the path of speeding up the turn-around time of a railroad car and guaranteeing shipments of freight for the national economy is the thoroughly bad job of cleaning that is done on railroad cars after unloading. Thousands of cars are moving along the railroads with remainders of the most diverse materials in them. Recently 1,700 gondola cars arrived on the East Siberian main line; these were gondola cars which one could not clean up from the cargoes that remained in them under ordinary conditions. On the Novokuznetsk Branch of the Kemerovo RR alone, nearly 400 so-called "difficult" railroad cars piled up during January.

They have been forced to recruit track service workers, car workers and, in general, just anybody, expending rather substantial funds thereon, in order to clean cars at loading stations. During the winter this operation is sometimes dragged out for many days, requires an increase in switching operations and, again, railroad cars lie idle for a long period of time empty. The consignees of the freight pay for the cleaning of the railroad cars separately, although unloading "with a broom" was envisaged by the accepted standards. And inasmuch as railroad cars arrive from the consignees not fully cleaned, railway workers have been forced to be enlisted in the work and once again to be paid for it. Funds are spent in a less than thrifty manner. The situation is aggravated by the fact that the cleaning of railroad cars is done at many stations directly on the receiving and shipping tracks. This soils the tracks, is dangerous for train traffic and makes for delays of trains on the approaches to the stations. Frequently the remnants of freight—and these can even be critically scarce materials—simply go to the junk heap.

**Financial** liability of freight consignees, which is a fine in the amount of 15 rubles per railroad car, is stipulated for turning over uncleaned rolling stock after unloading. But, considering the fact that these fines are fully recovered through an increase in the price of output, measures to heighten financial liability for failure to clean railroad cars do not have any effect. The need is long overdue for railway workers to display a principled exactingness in this question and beginning with a definite period, let's say, 15 June, to prohibit categorically the dispatch of uncleaned railroad cars from the site of their unloading. This right was written into the Charter of Railroads, but the managers of many stations, not wishing to spoil their relations with the consignees of the freight and acting out of the need for "local profit"—the railroad car will leave the station faster—do not wage an active campaign against this evil.

Still another important reserve is ensuring the safekeeping of railroad cars and their prompt repair. The experience of the Chelyabinskaya Oblast Party organization, as approved by the CPSU Central Committee, testifies to the huge effectiveness of this reserve. Party committees at enterprises and construction projects in the oblast are attaching great significance to

inculcating in workers a feeling for a thrifty attitude toward the railroad car as the people's property. At the metallurgical and pipe-rolling plants, for instance, a strict procedure has been established: you damage a railroad car, then repair it yourself. Repair points equipped with railroad car repair machinery of the "Donbass" type have been created at plants with the assistance of the railway workers from the Chelyabinsk Branch. As a result, cars do not return to the railroad's repair points, but arrive here for loading after repairs.

However, the number of damaged railroad cars is numbered in the tens of thousands for the country as a whole. During the year before last, for instance, more than 6,000 railroad cars were returned to the Navashino station from the industrial sidings of the Vyksa Metallurgical Plant owing to the fact they were in a state of disrepair. A significant portion of them had to be dispatched to the railroad car depot for rebuilding. As a result of this, railway workers and, subsequently, freight shippers lost more than 200,000 railroad car-hours. The most surprising, I think, is the fact that the breakages in the rolling stock at the plant were considered inevitable.

And here, based on the example of the people from Chelyabinsk, workers in related industries decided last year to create on the basis of proportional shares a mechanized point for the repair and preparation of railroad cars for loading on an industrial siding. During a comparatively brief period of time, railway workers and plant specialists built this point—on the site of a dead-end track. And as early as October more than 200 railroad cars were restored to health, while in November and December, there were more than 1,200 such railroad cars. In conjunction with this, the metallurgy plant workers from Vyksa are rebuilding rolling stock not only for their own needs, but also supply many nearby enterprises and organizations with high-quality empty cars. Thus, additional opportunities to speed up freight shipments are arising.

Speaking at the November Plenum of the CPSU Central Committee, Comrade L. I. Brezhnev expressed confidence that Party organizations will render to transport services the necessary assistance and support in heightening the efficiency of operations and in strengthening labor and industrial discipline and will strengthen supervision over the fulfillment of shipment plans. Railway workers are accomplishing great tasks during the fourth year of the five-year plan. The dimensions of freight shipments will increase by 120 million tons—this is more than two-fold higher than the increment for last year. Freight turnover will grow by more than 100 billion ton-kilometers and will exceed 3.5 trillion.

Considering the fact that railroads as well are now working with a very large load, these targets appear very much stepped-up. One is required to exert a maximum of force and energy for their successful fulfillment.

The price of a railroad car is high. Acceleration of the turn-around time of a railroad car by a total of just one hour permits one to ship an additional million tons of output. The key to the chief reserves, just as before, is to be found in a more productive utilization of rolling stock.



## TRANSPORTATION

### PEOPLE'S CONTROLLERS FACE LENINGRAD OBLAST'S TRANSPORT PROBLEMS

Leningrad LENINGRADSKAYA PRAVDA in Russian 25 May 79 p 2

[Article by N. Volkov, division chief of the Leningrad Oblast People's Control Committee: "Links in the Transport Conveyor"]

[Text] The decree of the CPSU Central Committee that approved the experience in labor cooperation of the collectives of sailors, railway workers, motor vehicle transport workers and rivermen at the Leningrad Transport Junction has, from its very first days, become a most important document for thousands of people's controllers in these sectors, a document which has defined the direction of their activity for today. The organization of transport operations in mutually-coordinated continuous plans and schedules on the basis of a unified industrial process has demanded a different approach from active workers as well toward the organization of inspections and toward supervision over putting into effect those measures from which the entire program for heightening the efficiency of transport operations is made up.

Special staffs or commissions have been created at the railroad stations in Leningrad and in Leningrad Oblast to supervise the course of processing and haulage of freight. In many executive committees of rayon Soviets of People's Deputies, the controllers have joined the staff of the commissions coordinating the work of all forms of transport. And the inspections themselves, which are being conducted by the organs of people's control, are taking on an ever more comprehensive character.

This has recently helped one to see clearly the substantial reserves to be found in the utilization of various forms of transport. The considerable shortcomings in planning the organization of shipments on the Leningrad-Moscow Branch of the October RR were the cause of the fact that railroad cars lay idle beyond all sorts of norms at many of its stations. The plan for departure of freight was systematically frustrated and delays of freight and passenger trains were frequent.

The recommendations of the people's controllers, drafted as a result of an analysis of the work of the branches, presented an imposing list. Their

incorporation has already helped to reduce the railroad car turn-around time by 0.7 hour during the first quarter of the current year. The layover of each car on station tracks decreased by 1.2 hours.

Last year the people's controllers inspected nearly 40 enterprises, directing attention to the possibility of organizing more rational shipments. And here are some of the results: recently 4.5 million tons of freight were transferred from rail transport to river transport, which has enabled them to free almost 90,000 railroad cars. There were 30,000 tons transferred to motor vehicle transport, while another 60,000 tons will be transferred during the current year. There is a real possibility of increasing several-fold the shipments of freight by river transport for the Kirov Plant Association and the Bol'shevik Plant, which have their own moorages and gear. The Kuznechnoye [Forge] Association of the Glavlenstroymaterialy [Main Leningrad Administration of the Building Materials and Parts Industry] is now shipping a total of 600,000 tons of freight by waterway, while the annual output of the enterprise is 4.5 million tons. Thus, there are considerable reserves here as well.

As we know, the traffic carrying capacity of railroads is growing with the organization of so-called unit train shipments. Last year they began to dispatch 74 more railroad cars each day on the October RR alone with the assistance of groups and posts of the People's Control as a result of better organization of these shipments. It has been planned to raise the level of unit train shipments to almost 45 percent--this will, as a result, provide for an acceleration of the turn-around time of rolling stock.

Information arrives daily in the Oblast People's Control Committee on layovers of railroad cars on the sidings of industrial enterprises. It tells us that each railroad car lies idle here on the average of two and a half hours above the norm and every 24 hours 900 cars remain unloaded. In analyzing the reasons for these layovers, you first of all run into poor organization of the processing of freight.

Groups and posts of People's Control must now devote paramount attention to the elimination of weak spots in the transport conveyor. In conjunction with this, not only inspections and the disclosure of reserves, but also active assistance to collectives and constant supervision over the utilization of the foremost experience of the workers of the Leningrad Transport Junction must occupy a significant portion of their activity. People's controllers at each railroad station, motor vehicle enterprise, maritime or river port must dig especially deeply into the organization of coordinated work with employees of related industries and, in an operations-effective manner, take efficacious measures so that freight would not lie on platforms and in warehouses for a long period of time.

During the past year they have succeeded in reducing the layovers of ships by 27 percent, railroad cars by 23 percent and motor vehicles by 10 percent in Leningrad and the oblast. During the current year Leningraders have pledged themselves to strive for a further rise in the efficiency of utilization of all forms of transport. People's controllers must make a substantial contribution to the accomplishment of this task.

## TRANSPORTATION

### SLOW TURN-AROUND TIME OF RAILROAD CARS AT KRIVROY ROG VIEWED

Moscow EKONOMICHESKAYA GAZETA in Russian No 10, Mar 79 p 16

[Article by M. Tkach, chief of the non-staff division of transport and communications of the [Krivoy Rog] City People's Control Committee: "In Close Interaction"]

[Text] Close interaction of main line and industrial rail transport is one of the main conditions for efficient utilization of rolling stock, for speeding up the turn-around time of railroad cars and for fulfillment of the plans for shipment of freight for the national economy. Eloquently testifying to this is the example of the work of many stations on the Krivoy Rog Branch of the Dnepr RR and of collectives of transport workers and enterprises of the Krivoy Rog Iron Ore Basin.

Workers in related industries, namely, railway workers and miners, have already accumulated solid experience in organizing over-all socialist competition for an improvement in the utilization of the means of transport.

Here's how they did it in the railway shops of the metallurgical plant and the Southern Mining and Ore-Dressing Combine and at the Krivoy Rog, Krivoy Rog-Sortirovochnyy [Classification Yard] and Mudrenaya stations, which are intimately tied to each other in freight, switching and train operations. Agreements on competition have been reached among these collectives. Combined meetings are held regularly.

A large flow of raw material, materials, scrap metal and equipment arrives daily at the Krivoy Rog Metallurgical Plant. Finished output is shipped to many addresses. More than 2,000 railroad cars are processed on the average in 24 hours on industrial sidings. At the Southern Mining and Ore-Dressing Combine, the freight turnover is 800 to 850 railroad cars every 24 hours. The layover here of cars of the Ministry of Railways in January of this year was lower than the norm.

These and other enterprises are serviced by the Krivoy Rog station. It is responsible for the loading of agglomerate, concentrate, iron ore, coke, rolled

metal of various shapes, metal products, construction cargoes, reinforced concrete products and liquid cargoes, as well as for the unloading of freight that is arriving, including coal, cement, sand and foodstuffs. With such a scope of operations, one does not always succeed in observing a regular tempo in work and industrial discipline. Not just a rise in the sense of responsibility, but also the rendering of practical assistance to employees in related industries and a strengthening of labor cooperation and the sense of good organization in all links are required. As a result, the station fulfilled the norm for layover of railroad cars in January and the first half of February 1979.

"If difficulties arise among us," Vasilii Gavrilovich Baranov, chief of the Krivoy Rog station, relates, "then with the consent of the collective at the railway shop of the Southern Mining and Ore-Dressing Combine, we direct a unit train of empty cars to their industrial siding for the loading of ore without preliminary preparation. The employees of the Southern Mining and Ore-Dressing Combine themselves process, make minor repairs and perform maintenance on the railroad cars and then marshal the loaded unit train. All this speeds up the turn-around time of railroad cars."

If in the past consists loaded with agglomerate were hauled by locomotives of the Krivoy Rog station, then now this is done by diesel locomotives of the railroad shop at the metallurgical plant. In case of need, employees in related industries hasten to the help of one another.

At one of the joint meetings of the participants in comprehensive intersectorial competition, railway workers from the Krivoy Rog station asked the employees of the railway shop of the Southern Mining and Ore-Dressing Combine to load so-called local unit trains as a first order of priority. This provided an opportunity to make maximum use of the rolling stock and in one 24-hour period to load, unload and reload that same unit train, i.e., to performed paired operations.

At that same meeting the transport workers of the Southern Mining and Ore-Dressing Combine lodged a complaint against the railway workers at the Mudrenaya station, who had sent individual cars to them that were in a state of disrepair, which held back the transition to paired operations in freight work. But they drew practical conclusions from this.

Shift and 24-hour operations planning for the loading and unloading of railroad cars, as well as for their conveyance, has now been introduced on the industrial sidings of the metallurgical plant. In conjunction with this, boundaries are being specified in terms of each shop, station and frontage for loading and unloading operations. Execution is being carefully supervised by traffic controllers.

As soon as the experience of the people of Chelyabinsk in reducing the layover of railroad cars during freight operations and in ensuring their safekeeping at industrial and railway enterprises had become known, the collective of the fourth shift at the railway shop of the Southern Mining and Ore-Dressing

Combine, which is supervised by traffic controller Valentina Ivanovna Prisyazhnyak, picked up this splendid innovation. Then all the remaining shifts at this railway shop supported the initiative.

The railway workers of the shop are also competing with the miners from a mine that is included in the structure of that same combine. The motto, "Employee in a related industry, don't let us down!" has become the usual form for expressing mutual relations.

Production successes will become even more impressive if they build a car dumper at the Southern Mining and Ore-Dressing Combine. The Ukraine SSR Ministry of Ferrous Metallurgy must assist the enterprise in this.

The development of railway services is lagging behind basic production at the metallurgical plant. The renovation of the Vostochno-Sortirovochnaya [Eastern Classification Yard] station and of the diesel locomotive-crane depot and the construction of a jet [reaktivnaya?] installation for the cleaning of railroad cars have been dragged out here. Blast Furnace No 9 has already been in operation for a long time, but some railway objects connected with it have still not been completed as of this time.

During the second half of 1978 the Krivoy Rog City People's Control Committee conducted 11 inspections connected with speeding up railroad car turn-around time at 22 enterprises and in the city's organizations and on the branch of the Dnepr RR. Non-staff people's controllers and representatives of KOMSOMOL'SKIY PROZHEKTOR participated in them. On the basis of the materials from the inspections, it appeared that unauthorized monetary expenditures were made and fines were levied against officials to blame for delays in transport during loading and unloading.

As we can see, comprehensive competition has still not taken hold at all the enterprises in the city. We are faced with expanding its limits in 1979.

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## TRANSPORTATION

### FREIGHT OPERATIONS PROBLEMS ON AZERBAIJAN RR VIEWED

Baku BAKINSKIY RABOCHIY in Russian 27 May 79 p 2

[Article by A. Bakhishev, deputy chief of the traffic division of the Baku Branch of the Azerbaijan RR: "The Effect of Adding Forces"]

[Text] A year has passed since the time of adoption of the decree of the CPSU Central Committee, "On Organizational Work of the Chelyabinskaya Oblast CPSU Committee on Reducing Layovers of Railroad Cars During Freight Operations and Providing for Their Safekeeping at Industrial and Railway Enterprises of the Oblast." Since that time, the experience of the people of Chelyabinsk has occupied a special place in the over-all socialist competition of railway workers and workers of industrial enterprises. Its dissemination is promoting a further rise in the efficiency of utilization of the means of transport and fuller provisions for the national economy's demand for shipments. It is possible to become convinced of this as well on the basis of the example of labor cooperation of the collective at the Sumgait station with the collectives of the city's enterprises.

Previously, difficulties in the organization of loading and unloading operations were experienced continuously at the Sumgait station. Freight operations were performed in an especially poor manner at night, on Sundays and on holidays. On certain days, 200 to 300 railroad cars lay idle here in anticipation of unloading. This put a clamp on switching opportunities and limited the receipt of trains, which were detained at intermediate stations, occupied stations tracks there and thereby complicated traffic on the entire main stretch of the main line, which is the northern course of the railroad.

A staff is now functioning in the Sumgait City Party Committee which coordinates the work of the railway station and enterprises; over-all competition has spread among these collectives. By incorporating the experience of the people of Chelyabinsk in their work, the workers at the station have implemented a number of measures on the mechanization of materials handling operations and increasing the extent to which shops are technologically equipped. It was also necessary to revise the existing industrial processes for operations at the station and industrial sidings adjoining it, after subordinating these processes

to the creation of conditions for the employment of progressive methods of loading and unloading. One can cite among such methods that of putting freight into packets, thereby enabling a sharp rise in the efficiency of use of railroad cars. The output of the synthetic rubber plant, pipes, glass and powdered detergent are now loaded in packets.

The impact from the use of advanced methods of loading has not been slow in making itself known. First of all, the very process of loading railroad cars has been speeded up. Secondly, the dead load per railroad car has been raised in excess of two tons by enterprises of the chemical industry alone. A large gain was also obtained through the introduction of a unified industrial process for operations at the station and chemical plants, envisaging the marshaling of trains directly on industrial sidings belonging to the freight shippers with the use of their switching locomotives. This procedure has ruled out the need to reclassify loaded cars on station tracks and has permitted one to speed up the dispatch of trains from the station. During the course of the past year and the first quarter of the current year, almost 800 consists were marshaled in this way on the tracks of enterprises.

Following the example of the people from Chelyabinsk, a number of measures were also carried out in Sverdlovsk to ensure the safekeeping of railroad cars. Industrial sidings were repaired at many plants and supervision over the activity of consist-classification brigades engaged in switching operations has been strengthened. The repair of frontal doors of railroad cars and hatches, as well as lateral supports on gondola cars is being carried out at enterprises and, in particular, at the pipe-rolling enterprise. Much is also being done at the railroad station. Through the use of internal resources, two tracks that accommodate 100 railroad cars each have been built here by an economical method and a dead-end track for parking locomotives has been laid. Radio communications between the watchmen on guard at the station and the engineers of diesel switching locomotives have been set up and put in smooth working order.

The combining of the forces of workers in related industries has yielded a tangible result. In 1978 the layover of railroad cars on the tracks at the pipe-rolling plant, for instance, was reduced by one hour, while during the first quarter of the current year, it was reduced by three hours. Almost 500 railroad cars have been freed here for additional shipments.

The example of cooperation by the people of Sverdlovsk, which is supported by the city Party organization, shows conclusively what potentials lie in combining the forces of railway workers and the workers at enterprises. It merits high approval and the most widespread dissemination, which will permit a rise in the efficiency of utilization of the means of transport, will ensure the safekeeping of the railroad car fleet and will amplify shipments of freight for the national economy.

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## TRANSPORTATION

### BENEFITS OF THROUGH TRAIN ROUTING DISCUSSED

Moscow GUDOK in Russian 24 Mar 79 p 2

[Articles by Dr Technical Sciences Hero of Socialist Labor V. Osipov, grouped together on a single newspaper page and all dealing with the same subject: "Through Train Routing as a Major Potential for Accelerating Deliveries"]

#### University of Pace-Setting Experience

[Text] Already during the first few five-year plan periods the through-routing of freight trains began to be introduced on this nation's railroads. And the first congress of routing workers was convened in 1926. In the 1930's there was conceived the method of staggered routing which even then helped to markedly accelerate the movement of rolling stock. During World War II the Belorussian and subsequently the Kuybyshev and many other railroads successfully practiced staggered and forward through-train routing which made possible the high-speed movement of the most important consignments.

These days the nation's railroads are operating under a substantial strain. Under such conditions the importance of through-train routing is particularly great. The skillful exploitation of the advantages of through trains markedly augments the transit capacity of trunk lines and accelerates the movement of freight cars and hence also in the final analysis serves to increase the volume of hauls.

The East Siberian Railroad has tested an experimental system for the scheduling and formation of superlong-distance high-speed through trains. The results of this experiment convincingly demonstrated the continuing existence of considerable potential that

can be exploited by introducing optimal through-train routing techniques. Today the Hero of Socialist Labor, Doctor of Technical Sciences, Professor V. T. Osipov who heads a special Ministry of Railroads team at the East Siberian Railroad describes the nature of this new system and its potential.

#### The Siberian Experiment: Superlong-Distance High-Speed Trains

During his trip to Siberia and the Far East, in his speech in Vladivostok, General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet, L. I. Brezhnev declared: "...logs sometimes lie at stations for 2 to 3 years because freightcars for transporting them are not supplied on time. The logs begin to rot while industry suffers a shortage of forest materials for processing into paper and silvichemical products. The problem of transporting logs should be solved by the ministries and other concerned departments. We cannot tolerate such an abnormal situation." The problem was stated clearly, and obviously its solution primarily depends on the railroaders. Accordingly, it was decided to draft proposals for a radical improvement in the transportation of Siberian logs. We have offered such proposals to the Ministry, and they have been approved. A special team of scientists and experts traveled to the East Siberian Railroad to introduce the new experimental system for the planning and organization of the transportation of logs by special high-speed through trains.

What is the nature of that system?

In developing it we proceeded from the results of a detailed analysis of the situation at the Railroad. These findings showed that, basically, all the timber-carrying freight cars traveling from Siberia to Central Asia and the European part of the USSR were reprocessed at the first large marshalling yard--the Inskaya Station of the East Siberian Railroad, and subsequently they were reprocessed several times more at the marshalling yards of other railroads. For example, 70 timber-carrying freightcars from the Yenisey Station (now belonging to the Krasnoyarsk Railroad) departed in the course of a single day in small batches to many stations of different railroads and sectors, so that, under the train-formation plan, they were reprocessed at 22 different technical stations! Considering that the East Siberian Railroad dispatches 1,700 timber-carrying freightcars daily alone, the resulting volume of marshalling-yard operations can be readily imagined.

Incidentally, nothing had changed even when the timber-carrying train was called a "through train." As a rule, such trains all the same proceeded to the Inskaya Marshalling Yard of the East Siberian Railroad and only two stations, Zdobino and Tayshet on the East Siberian Railroad itself, were relieved of reprocessing operations. The organization of such "through trains" required no effort. Through trains carrying bulk freight consigned to a single station were formed much more rarely. However, these trains too, while enroute, were as a rule reprocessed as it became necessary to

uncouple or add freightcars owing to changes in weight standards. For example, a through train from the Yenisey Station to Ryazan' was reprocessed four times because it was found not to conform with weight standards.

Underlying the system we developed is a different approach to the planning and organization of through trains, based on the following classification:

- 1) through trains proceeding to a single destination station with consignments to one or several recipients;
- 2) through trains with gradual unloading of freight at several stations within the same sector;
- 3) through trains with gradual unloading of freight at several stations in different sectors;
- 4) staggered through trains proceeding to the same destination station;
- 5) staggered through trains with gradual unloading at several destination stations within the same sector;
- 6) staggered through trains with gradual unloading at several destination stations within different sectors;
- 7) through trains proceeding to distant marshalling yards before becoming split up.

The scheduling of through trains in accordance with the system we proposed should follow precisely the above sequence. It assures giving priority to the formation of the most expedient through trains, with the remainder of forwardable freight to be carried by the other types of through trains following the above sequence with increase in the degree of the gradualness of their unloading, so to speak.

The first stage of the experimental introduction of the new system of through-train routing was the determination of the required number of freightcars to be loaded, and of destination stations and destination railroads with respect to every variety of felled timber, followed by an analysis of these data. The analysis served to compile a table illustrating the numbers of freightcars proceeding to each destination station and railroad. In accordance with that table, by way of an experiment, staggered through trains were planned according to our system from a single sector of the East Siberian Railroad. The formation of through trains followed this plan for a single month. During that period, 18 long-distance and superlong-distance staggered through trains were organized.

During the second stage we commenced compiling an overall schedule for loading through trains throughout the East Siberian Railroad. The exact loading dates, number of freightcars, and destination stations and railroads



were specified. As a result, in a single week alone 14 long-distance and superlong-distance through trains carrying about 45,000 cubic meters of felled timber were dispatched from the East Siberian Railroad. They covered an average distance of more than 4,000 km each.

During our experiment at the East Siberian Railroad we encountered a large number of difficulties whose analysis enabled us to infer certain general conclusions. While introducing the new system of through-train routing we ascertained that its efficient performance requires revising the procedure for assigning freight consignees to suppliers so that the felled timber would have to travel via not more than two or three different railroads before reaching its destination. It is also necessary to organize major timber dispatching stations and close the relatively unproductive stations at which not more than five freightcars daily are loaded with forest materials. Another major factor is the further introduction of route scheduling according to destination.

It is worth noting that the Irkutskaya Oblast CPSU Committee and the Oblast Executive Committee provided considerable assistance in the preparation and introduction of the new system for the planning and organization of timber-carrying through trains at the East Siberian Railroad. Credit should also be given to the Krasnoyarskiy Kray CPSU Committee and the Kray Executive Committee, as well as to the heads of the East Siberian Railroad--Traffic Service Chief P. I. Kislitsin, his deputy V. K. Tananykin, Through-Train Routing Inspector M. M. Krupenin, the Stationmaster at Yenisey V. N. Tarasevich, and also the ministry employee A. M. Rotanova and Coworker of the USSR Academy of Sciences, Candidate of Technical Sciences S. M. Rezer.

The experience thus gained convincingly demonstrates that at present railroad transport still displays considerable unutilized potential and particularly as regards the acceleration of the movement of freight by means of through-train routing. Consider these figures: a through train from the Ust'-Ilimskaya Station took 7.2 days less than usual to travel to the Zaporozh'ye Region (distance 5,961 km), and passed without stopping the stations Inskaya, Omsk, Kropachevo, and Valashov. A through train from the Yenisey Station to the Ryazan'-Oka station (distance 4,124 km) took 4.3 days less than usual and did not stop at such processing stations as Inskaya, Sverdlovsk, Balezino, and Petushki. Such results warrant a study of the possible effectiveness of the introduction of the new through-train routing system on the scale of the entire railroad network.

#### Test Area: The Entire Railroad Network

I will begin my discussion of the results to be expected from the use of superlong-distance high-speed through trains throughout the railroad network by citing several extremely eloquent figures.

A one-minute reduction in processing time per freightcar at technical stations would save 1,600 freightcars for extra use.

The transportation of just 10 percent of the total quantity of freight by long-distance and superlong-distance would relieve hundreds of thousands of freightcars annually.

Allowing for the attendant savings in capital investments in freightcar construction, this would result in saving billions of rubles.

In this country through trains could carry as much as 50 percent of all freight.

This is a far from complete list of the advantages to be gained from a broad introduction of superlong-distance high-speed through trains. Under the new system for the organization of through trains, they are expected to consist of a fixed number of freightcars each--50 four-axle freightcars. This would preclude stops at reprocessing stations for uncoupling or attaching to maintain weight standards. Thus, the speeds of through freight trains can be made virtually equal to the speeds of passenger trains.

The techniques developed for the planning and organization of superlong-distance high-speed staggered and complete through trains can be broadly introduced not only for transporting forest materials but also for delivery of black coal, iron ore, grain, building materials, and machine-building products. As proof, let us cite just one example. On the request of the heads of the Krasnoyarsk Harvesting Combine Plant, we analyzed the possibilities for organizing the dispatching of through trains carrying the output of that enterprise and provided appropriate recommendations. We developed at that plant a schedule for loading harvesting combines onto rolling stock for a month ahead on specifying the destination stations and railroads as well as the needed number of freightcars. Accordingly, we recommended the organization of several complete through trains with a single destination for unloading the consignment, followed by several staggered through trains with gradual unloading at several stations in different sectors, with the remaining freight to be dispatched in through trains that would not be split up until they reached a distant reprocessing station. As a result, of the 1,278 freightcars envisaged in the loading plan we scheduled dispatching only 1,100 freightcars or 87 percent, as formed into through trains. A corresponding monthly schedule of loadings by destination has been drafted. The scheduled through trains included 10 complete through trains with staggered unloading, and only two through trains proceeding to marshalling yards.

It should be emphasized that a novel feature of the system is the consignment of through trains to one or several enterprises located at one or several stations of the destination railroad. As a result, prolonged demurrage of trains while unloading, due to limited possibilities of recipients, can be avoided.

The conventional through-train routing system assures the conveyance of more than 45.5 percent of all freight by through trains. This seemingly

satisfactory situation is not so favorable when examined more closely: All these through trains are basically short-distance. That is a major reason why the mean distance of travel of loaded freightcars on the railroad network does not exceed 350 km. There are virtually no long-distance through trains traveling for 4,000-5,000 km at present.

Considerable difficulties also arise owing to the conflict between the possibility of achieving substantial savings to railroad transport and the entire national economy, by means of through-train routing and the existing regulations governing deliveries at most ministries and departments. These regulations provide for dispatching freight to numerous recipients in one or two carloads apiece on the basis of their mean daily needs.

Lastly there exists the strange procedure under which several years ago all consigners began to submit to the railroad administration so-called plans for freight transportation which do not name the destination stations on other railroads. This exactly is the chief reason why long-distance through trains are virtually never scheduled, and all trains proceed to the nearest marshalling yard. How can the monthly schedule of loadings be compiled if destination stations are not known in advance?

A major obstacle to the organization of long-distance through trains is the absence of unified weight standards for different railroads. All this has prompted railroaders to schedule through trains only after they are "under way," in accordance with operative changes in situation, on the initiative of individual teams rather than in accordance with an exact longterm plan.

Thus, the analysis of the results of the experiment carried out half a year ago at the East Siberian Railroad served to draw a large number of conclusions on factors interfering with the organization of long-distance high-speed through trains and, most importantly, on steps to be taken to eliminate these obstacles.

#### A Green Light for Through Trains!

Above all, the expansion and improvements of through-train traffic requires refining the entire system for the planning of the shipping and delivery of the output of various branches of industry and agriculture. It appears necessary to make a special provision in annual, quarterly and monthly plans of hauls for the volume of shipping of each type of output in through trains according to the newly developed system. The fulfillment of the task of through-train routing should be a major index of the fulfillment of the overall plan of hauls.

So that railroaders can schedule on time the formation of through trains, shippers should be obligated to name destination stations in plans of hauls. Given this condition, no material expenditures will be needed to elevate the level of through-train routing at large loading stations--a purposeful selection and accumulation of bills of lading will suffice.

Considerable benefits can be produced by a broad use of circular through-train routes. First, this will improve the systematic uninterrupted loading of empty rolling stock at the principal stations for the loading of coal, ore, grain, petroleum, building materials, and other bulk freight. Second, the use of circular routes will sharply reduce the expenditures on time on the preparation of rolling stock--washing, cleaning, steaming. Third demurrage and the volume of switching operations during train-formation will sharply decrease. Annular through-train routes are needed wherever there exist a stable mutual correspondence between the flow of freight in both directions at stations, as well as wherever the annular routes of through trains in empty state coincide with the customary routes of scheduled empty rolling stock.

It is necessary to re-examine the existing instructions, regulations, and other normative documents with the object of creating a comprehensive system of through-freight routing encompassing all types of transportation and all branches of the national economy. Special timetables of through-freight routes should be drafted, and should be reflected in the general timetable.

So that through trains may be dispatched smoothly, additional inspections should be performed where needed, and the standards for the demurrage of rolling stock under loading and unloading should be so revised as to make railroaders and customers interested in increasing the number of through trains. The system of material incentives should be revised so as to pay bonuses for every dispatched through train with allowance for its uninterrupted distance haul.

A further increase in the level of through-train routing is impossible unless steps are taken to broaden the volume of loading and unloading operations and provide the necessary machinery. This task is indispensable to the development of the entire transport system. However, it should be emphasized that, e.g. the conveyance of forest materials in superlong-distance staggered through trains can also be accomplished without expanding loading and unloading operations: This can be done by a proper organization of the collection of rolling stock and formation of trains.

Much remains to be done to develop through-train routing by our scientists. The plans for scientific research work at the scientific research institutes of transport and higher schools should provide for corresponding research based on a broad use of mathematical simulation and computers for the development of plans for through-train routing and for the organization of through trains. Clearly, changes will be needed in the structure of the administration of through-train traffic. It may be that it would be expedient to isolate as a separate subdivision the department of through-train routing currently existing at the freight administration of the Ministry of Railroads, in order to improve day-by-day supervision of such routing. It also appears worthwhile to set up departments or teams for through-train routing in various ministries and departments and, of course, at railroad administrations.

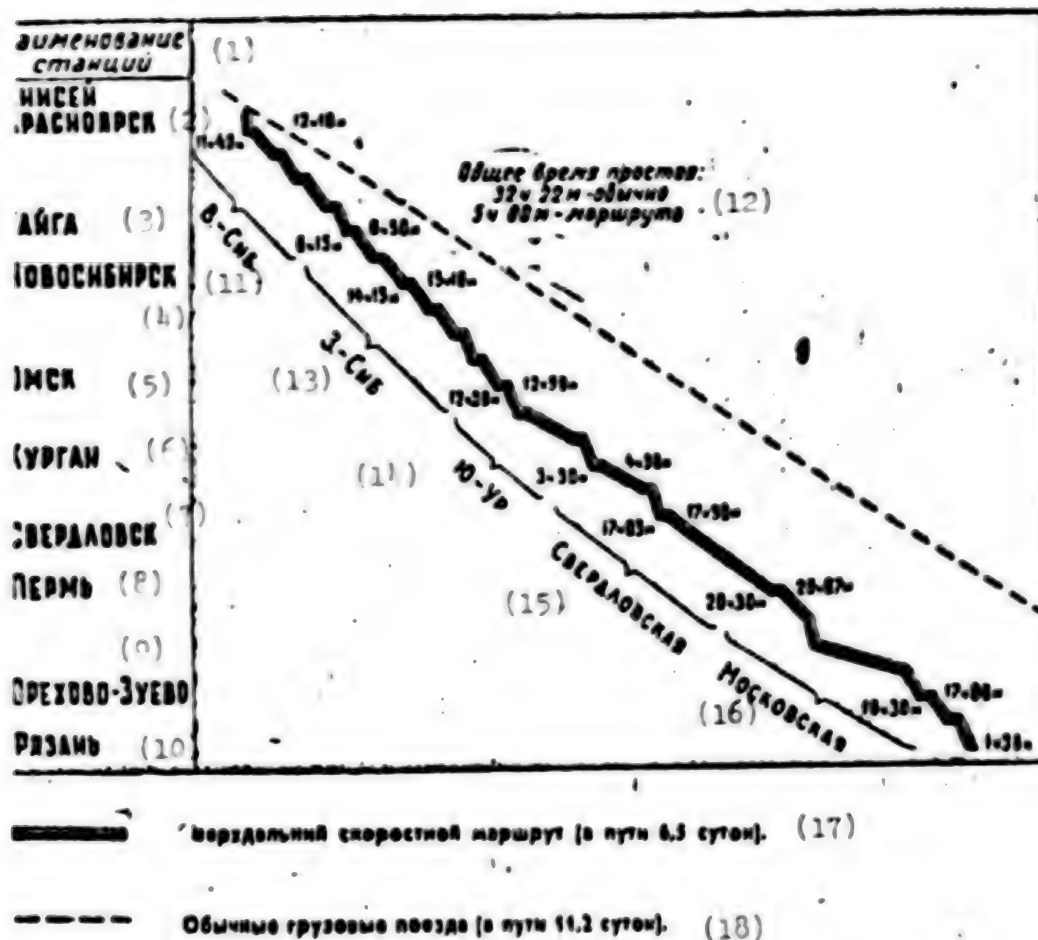
Broad and continuing publicization of the advantages of through-train routing is needed to demonstrate to all freight consigners and railroaders the benefits of this most progressive method of transportation. Would not it be a good idea to convene a national conference of through-train routing experts and representatives of the non-railroad ministries and departments at which concrete steps for increasing the share of through-train routing would be outlined? That conference should also discuss and settle the question of including the fulfillment of the through-train routing plan among the principal indexes considered when assessing the results of socialist labor competition.

The many years of experience accumulated in through-train routing within the railroad network as well as the result of the recent experiment in organizing superlong-distance high-speed through-train routing at the East Siberian Railroad confirm that the time is ripe to take radical steps to augment the number of direct, high-speed freight trains.

Table: Regularly Scheduled Train Traffic Compared with Superlong-Distance High-Speed Through-Train Traffic (As based on the East Siberian Railroad Experiment)

Index	Regular Train- Formation Plan	Through Trains	
		Ust'-Ilinskaya --Zaporozh'ye	Yenisey-- Ryazan' Oka
Rolling stock demurrage	78.5%	26.8%	19.9%
a) At freight stations	34.6%	14.8%	13.8%
b) At intermediate stations	8.2%	0	0
c) At technical stations	35.8%	12.0%	6.0%
Time rolling stock is in motion	21.4%	73.2%	80.2%
Mean daily travel of rolling stock	355 km	606 km	633 km





- Key:
- |                         |   |
|-------------------------|---|
| 1. Station              | 11. East Siberian RR  |
| 2. Yenisey, Krasnoyarsk | 12. Total demurrage time: 32 hr 22 min conventional vs. 5 hr for through trains |
| 3. Tayga                | 13. West Siberian RR  |
| 4. Novosibirsk          | 14. South Ural RR   |
| 5. Omsk                 | 15. Sverdlovsk RR   |
| 6. Kurgan               | 16. Moscow RR   |
| 7. Sverdlovsk           | 17. Superlong-distance high-speed through train (6.5 days under way)            |
| 8. Perm'                | 18. Conventional freight trains (11.2 days under way)                           |
| 9. Orekhovo-Zuyevo      |   |
| 10. Ryazan'             |   |

Photo caption: Timber-carrying through trains under way

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## TRANSPORTATION

### RAILROADS' ROLE IN SUPPLYING FUEL

Moscow GUDOK in Russian 31 May 79 p 1

[Article: "Fuel to the Winter Reserve"]

[Text] May, the last month of spring, is just finishing and summer is ahead. The demand for fuel by enterprises and electric power stations, however, not only has not been reduced, but has even grown, despite the fact that in May, the additional task for transporting the most important cargo of the five year plan was exceeded by more than 200,000 tons.

It's alarming that the collectives of such coal shipping main lines as the Kemerov, Tselina, and Eastern Siberian weren't able to cope with it. Regarding this, an extremely taut task was given for June: ship almost 60,000 tons more fuel per day than in May. Accordingly, the standards for gondola utilization are being stiffened and the demands on regulation roads are increasing.

Special consideration needs to be given to the operational conditions of the eastern routes. Shipping resources there are adequate and only a more effective resolution of the problems of unloading and moving trains is needed.

Unloading should also be more actively pursued on other routes. Only a quarter of the cars with local freight have been delivered to the unloading stations and spurs of enterprises. What does this tell? First of all, the low rates for delivering local freight. This applies primarily to the October, Northern, Gor'kiy, L'vov, Odessa-Kishinev, and Donetsk routes.

Control discipline also leaves much to be desired. As has already been mentioned, requirements on the roads supplying coal basins with empties are increasing in June and the demand of violators of control discipline will be more severe. Those collectives which turned out to be large debtors in May--the October, Southwest, Southeast, Far East, North Caucasus, and other routes--should take this into consideration.

More effective measures need to be taken for speeding up the turn-around of gondolas. It cannot be tolerated, for example, that on the Azerbaijan

route it was excessive by 1.5 days, by a day on the Northern, by almost a day on the Tselina, and by 12 hours on the Kemerovo and West Siberian. Scarce rolling stock needs to be provided a green light.

In truth, supplying the so-called "difficult stations" with empty gondolas has become the problem. Judge for yourself. Of the 6,000 cars of coal which were not sent by the Kuzbas, more than 4,000 were credited to Mezhdurechensk. And all because this station is remote from the entry by which empties are received. It's time for the Kemerovo leaders to end the practice of depriving the Southern Kuzbas of its fair share.

In a fundamental improvement, the organization for petroleum products flow is also in need. In May, the railroaders owed them more than a million tons. The trouble is that they don't wisely arrange the tank cars on the liquid cargo roads; they often are found not on those sections where there is an acute need for them. On the Kuybyshev route, for example, a continuing deficit of this rolling stock is observed on the Bashkir section at the same time when there are more tank cars than necessary on the road as a whole. You can say the same thing about the Southern Ural and the Western Siberian.

They also let you know about interruptions in supplying liquid cargo routes with empties. The account for this ought to be presented primarily to the workers of the October, Baltic, L'vov, Donets and Kemerovo.

In short, June ought to become a month of shock labor on the fuel production line. The successful resolution of this task will depend in many respects on the precision of interaction of transport workers and workers of the freight industry on the one hand, as well as railroaders and transport workers of the enterprises on the other.

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## TRANSPORTATION

### SUMMER SCHEDULE FOR AEROFLOT

Moscow GUDOK in Russian 31 May 79 p 4

[Article by Yu. Golyshev: "Aeroflot's Summer Navigation"]

[Text] Regular flights of the high-speed TU-154 airliner began not long ago on the Moscow-Ievek route. This is what B. E. Panyukov, chief of the Administration of Organization of Transport Operations and a member of the Collegium of the Ministry of Civil Aviation, recounted to our correspondent.

"With this flight by the TU-154 from the capital to the distant Chukotsk city of Ievek, the summer navigation of Aeroflot was inaugurated. A few words about the trip itself. Formerly, aircraft spend more than 30 hours on this route. Today, an airliner reaches its destination in less than ten hours and makes only one landing at Noril'sk."

Passengers bound for both Bilibino and Mys Shmidta will be able to use this airline. Local airplanes will convey them from Ievek. The time on the road is likewise appreciably shortened for them.

"In the second and third quarters of the present year," Boris Yegorovich continued, "Aeroflot is to transport almost 64 million passengers, far more than for the same period last year. While 4,194 trips were made in the summer months of 1978, now 4,400 of them are stipulated. Fifty new air routes will be opened."

Many inhabitants of Western and Eastern Siberia, the Far North, and the Far East travel to spend their vacation at the health resorts of the Crimea, Caucasus, and Baltic. Therefore, it's necessary to ferry empty airliners to the East at the beginning of summer and to Adler, Anapa, Simferopol', and other cities at the end of August. Despite considerable expenditures, Aeroflot primarily takes care of passengers.

"Moscow is connected by regular air service with more than 100 of the country's cities. What do the aviators offer to Moscovites and guests to the capital that's new during the summer?"

"During this year's summer navigation period (from May to September), the four Moscow airports will dispatch significantly more passengers than last year. At the height of the season, 666 trips will be accomplished daily."

The frequency and amount of flights to our country's southern resorts will especially increase. Thus, 18 trips daily will be made to Simferopol', 13 to Sochi, 9 to Minvody, and 8 to Odessa.

Trips in the first-class salons are enjoying great popularity with the holiday makers as well as with passengers going to the center of Khabarovskiy kray. As is known, first-class service has been introduced on several trips from Moscow to Sochi, Simferopol', Minvody and Khabarovsk. The passengers are given the most convenient seats in the aircraft, varied and tasty food, special service in checking and receiving baggage, and other extra services. Already about 50,000 people have taken advantage of the new type of air service.

Comfortable, high-speed autobuses convey air passengers to Moscow's airports. During summer, the frequency of the service will be increased. Just for the around-the-clock transport of air passengers, Glavmosavto trans [Main Administration of Automobile Transportation of the Moscow Gospolkom] has provided 441 autobuses, including 50 of the new "Icarus".

"But what other changes are waiting for the passengers on the ground?"

"The Ministry of Civil Aviation is carrying out intensive construction of modern air terminals. Large-scale construction will be started this year at the capital's Sheremet'ev and Vnukovo airports, which will be ready to receive the Olympiad-80 participants and tourists. The new air terminals at Frunze, Gur'ev, and Ural'sk will receive the first passengers.

"Two years ago," B. E. Paryukov stated in conclusion, "the booking of round trip tickets to a number of Siberian and Far Eastern centers was organized. This summer, you will be able to get them in 108 of the country's cities."

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## TRANSPORTATION

### RAIL TRANSPORT ACTIVITIES REPORTED

#### Rail Transport Problems

Tbilisi ZARYA VOSTOKA in Russian 19 May 79 pp 1-4

[Address by First Secretary of the Georgian Communist Party Central Committee comrade E. A. Shevardnadze, candidate for membership in the Politburo of the CPSU Central Committee, to the meeting of the most active workers of the Transcaucasian Railroad on 14 May 1979]

[Text] Comrades! Permit me on behalf of the Central Committee of the Communist Party of Georgia, the Presidium of the Georgian SSR Supreme Soviet and the Council of Ministers of the republic to warmly congratulate the collective of the Transcaucasian Railroad with a remarkable victory and awarding of the challenge Red Banner of the Ministry of Railways of the USSR and of the Central Trade-Union Committee of Railway Transport Workers, which the Minister of Railways Comrade Ivan Grigor'yevich Pavlovskiy handed to you today for the results of the socialist competition during the first quarter of 1979.

Permit me in your name to warmly welcome comrade I. G. Pavlovskiy, who came to us not only with regard to the victory of the Transcaucasian Railroad workers in the socialist competition, but also to discuss with us and to help us to solve timely problems of developing the Transcaucasian Railroad and to further improve its operation.

I would also like to fraternally welcome the representatives of the Armenian SSR, who, having arrived at the ceremonies for awarding the challenge Red Banner to the railroad, kindly agreed to remain to participate in the work of the most active members devoted to discussion of problems of railroad transport of the Georgian SSR.

The work of our most active members is being conducted in both a business-like and in a holiday situation.

The holiday situation not only does not exclude communist efficiency, but on the contrary helps us to more seriously concentrate on unsolved problems and to concentrate our attention on discussion of acute and principal problems of railway transport operation.

We are obligated to discover new reserves for developing transport work in a business-like manner, based on daring criticism of our own deficiencies.

This is even more necessary since not only the railroad workers bear responsibility for deficiencies in transport. And the matter of improving the operation of the railroad is our common concern. This is a general party and general state matter.

In my memory, this business-like meeting of bureau members of the Central Committee of the Georgian Communist Party with the railroad workers is the first during the past few years and it is desirable that it proceed at a high level.

The Central Committee of our party and personally Comrade Leonid Il'ich Brezhnev are involved daily, deeply and persistently in solution of transport problems.

Party concern about transport occupies a special place in the reports and speeches of Comrade L. I. Brezhnev.

In his brilliant speech at the 28th Komsomol Congress, Leonid Il'ich Brezhnev, pointing out the paths where the energy of the young builders of a communist society should be directed, including two important problems on which the efficiency and work quality of the national economy depend to a great extent, named transport.

The Politburo and Secretariat of the CPSU Central Committee are devoting special attention to transport problems, including further development of railroad transport.

One of the manifestations of the concern and attention to the needs of transport was participation and appearance at the expanded meeting of the board of the Ministry of Railways member of the Politburo of the CPSU Central Committee and Chairman of the USSR Council of Ministers Comrade A. N. Kosygin and member of the Politburo of the CPSU Central Committee, Secretary of the CPSU Central Committee Comrade A. P. Kirilenko.

These facts of the great political importance obligate all us to turn our faces toward transport, to more deeply penetrate into its needs and to assist to the maximum possible in solving the problems faced by it.

There is no doubt that the work of our most active members will proceed in a situation of party efficiency, mutual exactingness, mutual trust, under the sign of criticism and self-criticism, extensive analysis of the scientifically justified determination of paths made toward the future in light of the decisions of the 25th CPSU Congress and the 25th Congress of the Georgian Communist Party, the well-known decisions of the CPSU Central Committee on the Georgian party organization and further improvement of ideological and political-educational work.

By tradition, passing through a specific stage and emerging to new positions, the Soviet people summarize with enormous interest the results of their own labor and plan new tasks.

The tasks of the 10th Five-Year Plan are being successfully realized in the country and the republic.

The Soviet people are laboring well during the shock 1978 year. The national income was increased by 4 percent. Industrial production increased by 4.8 percent and reached 587 billion rubles. The gross grain harvest reached 235 million tons for the first time in the country's history. Record harvests for a number of other agricultural crops were also gathered.

A new important step has been taken on the path of satisfying the increasing spiritual and material needs of the Soviet man. One can confidently say that yet another brilliant page has been inscribed in the manuscript of the heroic struggle of the Communist Party and of the entire Soviet people for building a communist society.

Despite the unusually severe conditions of the past winter, good results were achieved in all spheres of the national economy during the first quarter of this year.

The Georgian SSR made its own worthy contribution to fulfilling the plan of social and economic development of the country in 1978 among the fraternal family of Soviet republics. Having achieved the highest increase of labor productivity, the republic ensured fulfillment of the sales plan for industrial products by 101.9 percent. The volume of industrial production increased by 7.4 percent compared to 1977. Thus, the toilers of the industry of the republic fulfilled their most important socialist pledge on leading growth of the rates of industrial production.

Our kolkhoz peasantry labored gloriously. A total of 430,000 tons of tea leaves and 575,000 tons of grapes were procured. The republic has never achieved such high yields in previous years for these most important crops.

The plans for grain, citrus, meat, milk, wool and other agricultural product procurement were overfulfilled.

The energy giant -- Inguri-GES -- and a number of other large installations became operational.

During the first 3 years of the 10th Five-Year Plan, compared to the corresponding period of the Ninth Five-Year Plan, the output of industrial production throughout the republic increased by 51.2 percent, the volume of agricultural products increased by 71 percent, assimilation of capital investments increased by 27.6 percent and the national income increased by 45.8 percent.

As you know, the republic has been awarded the challenge Red Banner of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee six times running for the highest achievements in the All-Union socialist competition.

This is how the main results of the inspired and selfless struggle of the Georgian communist and of all workers of the republic to fulfill the historical decisions of the 25th CPSU Congress appear in more concentrated form.

Rendering the proper successes to the workers of industry, agriculture and construction, we at the same time do not close our eyes to the deficiencies, sometimes very serious, in the work of these sectors of the national economy and we subject them to unpleasant criticism and require that the work be better postulated to determine and utilize internal reserves and on intelligent management of the economy.

But at the same time we state that the results of the first 3 years of the five-year plan instil confidence in us that we are on the correct path and there is no doubt that the problems which we face will be solved successfully with the persistent labor of our people.

The increased economic potential of the republic served as a reliable base for an appreciable increase of the material well-being of the workers, an increase of labor income, growth of freight traffic turnover, acceleration of introducing housing, schools and hospitals into operation and new impetus to science and culture.

There are specific principles and sequence in the fact that we and you decided to deeply analyze and universally discuss the problems concerning transport after consideration at the plenary sessions of the Central Committee of the Georgian Communist Party of problems of development of industry, agriculture and organization of capital construction.

All sectors of the national economy without exception can operate normally and can fulfill their intensive plans only provided there is uninterrupted transport service. And the Transcaucasian Railroad -- the main economic artery of our kray -- of course plays the main role in meeting the needs of the republic for shipments. Extending from the east to west and further to the north, from the boundaries of the Azerbaijan SSR to Krasnodarskiy Kray of the RSFSR, and having encompassed the main industrial centers and many agricultural regions of the republic, the railroad hauls an enormous volume of shipments.

A total of 18 billion ton-kilometers -- this is the freight traffic turnover during 1978. For comparison we were interested in what the level of freight traffic turnover was on the railroads of a number of capitalist countries, approximately equal to Georgia in territory, population or which have boundaries with us. Thus, the annual freight traffic turnover comprises 6.7 billion ton-kilometers on Belgian railroads, 2.7 billion ton-kilometers on Netherlands railroads and 7.9 billion ton-kilometers on Turkish railroads. Consequently, the Transcaucasian Railroad alone hauls a greater volume of freight shipments than the enumerated capitalist countries taken together.

According to data of the Scientific Research Institute of Information of the USSR Ministry of Railways, the freight traffic turnover of the country's

railroads increased by 106.2 percent during 3 years of the 10 Five-Year Plan, while that of the Transcaucasian Railroad increased by 112.5 percent. The Transcaucasian Mainline has emerged into first place in the country by this important indicator.

The increase in freight dispatching (loading in tons) comprised 104.3 percent throughout the railroad system of the Soviet Union, while it comprised 112.8 percent throughout the Transcaucasian Railroad. It occupies third place behind the Belorussian and Kazakh railroads.

The rail car turnover slackened by 8.9 percent throughout the railroad system of the Soviet Union during 3 years, while it slackened by 10.5 percent throughout the Transcaucasian Mainline. The railroad is in 16th place, which is of course impermissible, by this universal indicator.

The high level of freight shipments along the Transcaucasian Railroad must be combined with intensive passenger traffic. Taking this important circumstance into account and also such factors as the clearly marked mountainous profile of the railroad and the insignificant support with second tracks, even one who is not a specialist in the transport field can clearly imagine the intensive conditions under which operational work proceeds.

The Transcaucasian Railroad may not be regarded as an ordinary transport mainline. Its significance to the Georgian SSR is incomparably higher. And the Order of the October Revolution, proudly hanging on the railroad's banner, is recognition of its successes not only in the production sphere.

The Transcaucasian Railroad, the first Poti-Tbilisi section of which became operational in October 1872, that is, more than 100 years ago, was laid under conditions of complex terrain relief, such unique engineering structures as the Suramskiy and Dzhadzhurskiy tunnels, the Molitskiy and Zamanlinskiy viaducts and so on were constructed. For its time, it was a great creative victory of domestic engineering thought.

The Transcaucasian Railroad is of important economic and cultural significance. Its construction played an important role in the life of the peoples of Azerbaijan, Armenia and Georgia. The first Marxist societies in which Leninist training of cadres of professional revolutionaries occurred, were created in the main shops of the railroad and some of them later headed the assault against the tsarist autocracy.

The Transcaucasian Railroad was the cradle of the revolutionary workers' movement in the Transcaucasus. A. M. Gor'kiy worked and conducted revolutionary activity here in 1891-1892. Since 1898 the propaganda of Marxist teachings was led under the supervision of I. V. Stalin. In 1900 M. I. Kalinin supervised the strike of railroad workers.

The railroad workers conducted a daring and uncompromising struggle both against the Mensheviks, Mussavatists and Dashnaktsutians, who seized power in the Transcaucasian republics. A solid economic collapse, which had to



be eliminated without letup, was inherited by Soviet power due to their dominance. The national economy and primarily rail transport had to be restored and developed with the greatest energy.

Having arrived in Georgia in 1922, the People's Commissar of Railways F. E. Dzerzhinskiy participated directly in solving the acute problems of restoring the Transcaucasian Railroad.

Electrification was the main link of its reconstruction. As early as 1921 a search was instituted for water resources to construct a hydroelectric power station. In practice, two electric power stations -- the ZaGES and the RionGES, which supplied energy for train traction, were connected to each other by one of the first electric power transmission lines in the Soviet Union with output of 110 kilovolts and with length of 200 kilometers.

Everything related to electrification of the section of railroad through the Suramskiy Pass -- from design to construction and installation work -- was performed through their own efforts. There was no experience and there were no ready solutions. But the unparalleled Soviet patriotism and warm desire to make their own contribution to fulfillment of the GOELRO [State Commission for the Electrification of Russia] plan provided a brilliant solution of the problem. Within 5 years -- from 1927 through 1932, the Soviet Union's first mainline section was electrified and the first electric locomotive pulled a train through the pass section on 16 August 1932.

Following the Suramskiy Pass, electrification of other sections of the railroad continued at increasing tempos and approximately 300 kilometers was turned over to electric traction by 1941.

The rise of railroad transport and the increased discipline and qualifications of railroad workers, achieved during the pre-war five-year plans, provided clear work of the mainline under the severe conditions of World War II, from the beginning of which the Transcaucasian Railroad began to service the Dzhul'fa-Tebriz Iranian Railroad, and later its collective actively participated in repulsing the enemy which broke into the Transcaucasus, in the collapse of the German-fascist troops in the Northern Caucasus and liberation of the Caucasus territory.

During the war the railroad collective was the winner 19 times in the All-Union socialist competition and was 12 times awarded the challenge Red Banner of the State Defense Committee. The northern and southern sections of the Black Sea Line for troop transport were connected temporarily in an operational situation. This line played an important role not only during the war. It provided a second, shorter exit from the Transcaucasus, by which the national economic ties and passenger and freight shipments were sharply improved.

The Yerevan-Razdan-Sevan line, which has now been extended along the eastern shore of Lake Sevan, is of important national economic significance among the new construction projects of the postwar period.

The face of the mainline, whose steel tracks reinforced the historical ties of friendship and brotherhood of the Transcaucasian peoples, changed significantly during the years of the postwar five-year plans.

After the Azerbaijan Railroad became an independent railroad, the friendship and cooperation between the railroad workers of Georgia, Armenia and Azerbaijan not only did not slacken, but continued to develop and become stronger. Technical measures on outfitting the railroads are being implemented by a unified plan. Their collectives are sharing invaluable treasures of experience.

Strong ties of friendship link the railroad workers of the Transcaucasian and Northern Caucasian Railroad Mainlines. This is clearly manifested in the daily smooth work at the Black Sea junction line and primarily in the traditional socialist competition of two large multinational collectives.

During the period when the North Caucasus workers were conducting operations to electrify the Adler-Tuapse-Belorechenskaya sections, the Transcaucasians rendered extensive practical assistance to them and shared their rich experience in installation of the contact system and traction substations. In turn, the specialists of the North Caucasus Railroad assisted the workers of the Transcaucasian Railroad in equipping the centralized traffic control of sections of the Samtredskiy Division. The Samtredskiy traffic controllers underwent their practice in the Tuapse Division. The collectives of the Tuapse and Sukhumi locomotive depots and the Sukhumi and Sochi stations have been competing among each other for many years.

Friendship and mutual assistance play an important role in solution of problems faced by the railroad workers of the Transcaucasus in light of the decisions of the 25th CPSU Congress.

It is difficult to find a family in Georgia which was not related to the railroad in one way or another. There are many former railroad workers in almost each ministry in management work -- up to the minister. We enjoy the high prestige of the railroad worker among the people and honor his labor. The matter of honor of the current generation is not to lose this glory, but to multiply it.

When we talk about the achievements of industrial, agricultural and construction workers, we fully realize that these successes would have been unthinkable without the assistance of the railroad workers in transporting a colossal volume of raw material, materials, and fuel and in timely export of finished products.

The plan of loading national economic goods during 3 years of the five-year plan was fulfilled ahead of schedule, by 27 December 1978, and 577,300 tons was loaded above the plan. The increase comprised 30.6 percent compared to the first 3 years of the Ninth Five-Year Plan.

However, it should be noted that the road is not fully meeting the needs of some sectors of the national economy. Thus, in 1978 the Samtredskiy Division paid fines for failure to deliver rail cars and containers for loading of planned freight in the amount of 294,000 rubles, while the Tbilisi Division paid fines of 154,000 rubles.

A critical situation frequently occurs in export of agricultural products -- vegetables, potatoes and citrus fruits, which cannot tolerate delays in shipment and on the way to their destination. Last year almost the entire lot of early potatoes was exported in open cars, which could not help but be reflected in the quality of the product.

The central press organs and specifically LITERATURNAYA GAZETA, having set itself the goal of establishing worthy reduction in the quality and spoilage of fruits is occurring, recently conducted an experiment which determined serious defects in the system of monitoring the movement of perishable products: the rail cars were standing idle at the stations for days while awaiting dispatch and they are sometimes directed toward the point of destination along an extended route instead of the shorter route, and the delivery deadlines are being severely disrupted. There exists in our country a clearly developed state system for planning freight shipments, linked to the needs of the national economy and the capabilities of transport, its support with transshipment facilities, labor and energy resources and so on. But in the given case we are interested in the question of whether or not there are hidden reserves in transport so that the volumes of shipments can be increased due to the best utilization of locomotives and rail cars, the efficiency and quality of work can be raised and the needs of all sectors of the national economy can be more fully satisfied. As already noted, strictly speaking, this is the main problem of the order of the day of the most active members and this is the main subject of today's conversation.

One very negative tendency -- a continuous slowing of rail car turnover -- has been followed during the past 3 years in the operating work of the railroad. Whereas it comprised 2.58 days in 1976, it slackened to 2.63 days in 1976, to 2.64 days in 1977 and reached 2.83 days in 1978 compared to the planned 2.58 days.

What does this slackening of turnover mean for railroad transport and the national economy as a whole?

Each 10th of slackening of rail car turnover per day cancels the opportunity to ship 3 million tons of freight annually under the conditions of the Transcaucasian Railroad. Slowing the rail car turnover last year by 10 percent deprived the national economy of the opportunity to ship an additional 7.8 million tons of freight.

We cannot permit ourselves, as already noted above, to be in 16th place in the country by this indicator.

The main reserves of increasing the volume of shipments and meeting the needs of the national economy in freight shipments are hidden in acceleration of rail car turnover.

It is quite possible that this additional need for shipments did not exist in the republic, but this need did undoubtedly exist on the scale of the entire national economy of the country.

From 1975 through 1978 the rail car loading indicators increased by 10 percent, while the working fleet of rail cars on the railroad increased by 17 percent during the same time. Consequently, although the railroad also fulfilled the plan of freight shipments, it did so at an extremely high price. It took rail cars not belonging to it and deprived other sections of the railroad system of loading resources. This fulfillment of the plan of course cannot suit us.

During some periods the excess of the working stock reached several thousand rail cars. For this reason the main terminals and stations were transformed into points of constant delay of rail cars and lost maneuverability, which aggravated even more the difficulties in operation of the railroad.

Analysis shows that a rail car stands on the station tracks 89.5 percent of the time during a single handling and it is moving in trains only 10.5 percent of the time.

One asks the question: how justified are such long idle times of rail cars? We understand that a specific time is required for handling the rail car at loading and unloading stations. The production processes are being improved for this purpose and technically justified norms of idle times are being determined.

A rail car should normally stand idle for no more than 21.7 hours for a single loading operation, while in fact the idle time comprised 23.71 hours last year, i.e., 9.4 percent above the norm. The idle times of rail cars for loading operations increased by 1.5 hours or 7 percent during the past 3 years.

By improving the technology of maneuvering operations and loading-unloading operations, we should reduce the idle times of rail cars from year to year rather than increase them.

We know that some ministries of the republic, which do not know how to correctly organize freight operations on the access tracks of subagency enterprises, are guilty to an important degree in delay of rail cars. There will be a special conversation about them.

However, the railroad stations themselves display a negative example in this question.



It was established during an inspection of stations of the Tbilisi Junction that even the largest stations -- Tbilisi-freight and Tbilisi-terminal -- are experiencing difficulties due to limitation of warehouse capacities, inadequate use of mechanization and a shortage of loaders.

That is why the idle time of rail cars for a single loading operation, which comprised 25.2 hours at the Tbilisi-Freight Station in 1975, reached 35 hours in 1978, exceeding the norm by 32 percent.

An operation has been started to adhere to the norms of rail car idle times for loading operations at so-called intermediate stations, i.e., stations of the Kaspi, Abasha, Svirí type and so on.

Servicing primarily agricultural regions, these stations have solid freight traffic turnover and are engaging in an important matter. There are 104 of these stations in the republic. In 1975, 57 of them fulfilled the norm for rail car idle times for loading operations, 39 fulfilled the norm in 1976, 36 in 1977 and only 19 in 1978.

Gradually yielding its positions, the railroad has come to the point that 82 percent of the stations are at present not included in the planned norm of rail car idle times.

I would like to touch on a variety of rail car idle time to which the transport clientele has no relation at all. I am talking about the idle time of transit rail cars at the shunting and section stations where a significant rail car traffic is being organized and where trains of different destinations are being formed. In 1975 the average idle time of rail cars at these stations comprised 5.87 hours, while in 1978 it reached 6.38 hours.

As you can see, here is a clear trend of an increase of rail car idle times.

The Tbilisi-Shunting Station, where the mechanized hump yard costing 1.3 million rubles, due to which the handling capacity of the terminals theoretically increased to hundreds of rail cars per day, became operational last year, is making weather here.

However, not once even on the most favorable day was the hump yard able to achieve its design capacity. At the same time the Tbilisi-Shunting Station overdelayed 4,382 trains for 9,705 hours on the sidings due to a refusal to accept, which inflicted a loss of more than 2 million rubles on the state.

In 1977, operating on the old semihump yard with manual servicing, the Tbilisi-Shunting Station established a norm of an average rail car idle time of 7.9 hours, while the idle time increased to 8.7 hours in 1978 with improvement of the technical base.

What caused this situation?



Undoubtedly, much depends on the station managers. The new equipment has not been adequately assimilated, due to which the remote control system frequently fails and the hump yard stands idle. The staff of the leading occupations and so on has not been completed. However, eliminating the main causes of that which causes feverish activity at the station depends on the management of the Tbilisi Division and its subordinate traffic control apparatus.

According to the production process, the prepared stock on the dispatching tracks awaiting inspection of rail cars and approach of the locomotive may stand idle for 54 minutes. In practice the delay time of finished trains is twice as high -- an average of 2 hours. This delays the reception of trains continuously arriving from four directions.

This is how one disruption in the operating technique of the station results in an entire chain of other disruptions which in the final analysis paralyzes train traffic.

There are sufficient electric locomotives, but they are clearly not being utilized satisfactorily. Approximately 9-10 percent of the operating time of electric locomotives is expended uselessly on unproductive idle times at the stations.

The locomotives should be utilized better there where they are required.

A special operating depot costing 1.5 million rubles has been constructed at the Tbilisi-Shunting Station, but the situation with providing the train traffic with locomotives has not improved, but has deteriorated.

Failure to receive trains is not an ordinary disruption of the traffic schedule or a routine production hitch. This fact results in far beyond subsequent consequences.

Unaccepted trains are standing idle at Rustava. Gradually losing maneuverability, this station is ceasing to cope with its own main task -- to service the enterprises of a large industrial center. In trying to get out of the situation, the Tbilisi Division is beginning to slow down reception of trains from the adjacent Kirovabad Division. The Azerbaijan Railroad is responding to this by delaying reception of trains from the North Caucasus Railroad.

The chain of disruptions is lengthening, encompassing the new railroads. The North Caucasus Railroad and the other following railroads are resorting to unlawful "regulation" procedures, limiting dispatch to the south, i.e., to Azerbaijan, Georgia and Armenia, in this situation.

As a result the national economy is losing funds for metal, timber, cement and other very necessary materials.

All these difficulties are especially aggravated during periods when the southern turnover, i.e., freight going to Dzhus'fa and Yerevan is passed for one or another reason along an extended route through Kirovabad-Akstafa-Tbilisi, rather than along the established Imishlin route.

This problem should be thoroughly analyzed. If there are real opportunities to pass the southern flow through Tbilisi-Leninakan-Masis, then measures should be taken for practical utilization of them. But if these opportunities do not exist, we see no sense in extending the run of freight by 220 kilometers in order to idle the trains and to forget sections with extremely limited traffic capacity.

Apparently, the most radical solution of this problem would be construction of a Caucasian Transloading Railroad, which is provided by the decree of the CPSU Central Committee and the USSR Council of Ministers. Several generations of railroad workers have nurtured the idea of this railroad. But whereas 50-100 years ago the need for it was not as great, the railroad is as necessary as air now to the national economy of three union republics. It has been called upon to make more efficient and deepen the economic ties of the Transcaucasus with the national economy of the Soviet Union. Having reduced the run of freight by approximately 200 km, a transshipping railroad would provide the opportunity to reduce the transport delays of the country with hundreds of millions of rubles.

We feel an independent need to discuss all aspects of constructing this unique railroad with comrade I. G. Pavlovskiy.

Both the republics of the Transcaucasus, Gosplan of the USSR and of course the Ministry of Railways of the USSR should manifest singular interest and persistence in construction of this railroad.

Ivan Grigor'yevich, with regard to your arrival here some comrades have jokingly said that if the Caucasian Transshipping Railroad existed, you would hardly have changed to your native railroad transport and would have flown to Tbilisi by aircraft. After all, one can reach Moscow within 24 hours at modern speeds.

We should also discuss and take measures toward the beginning of construction of the new Marabda-Akhalkalaki Railroad Line in 1980. This railroad has been called upon to transform the economy of the southern region of the republic. When we are talking about the work of the Tbilisi-Shunting Station, we cannot help but recall that its collective recently emerged as the pioneer of introducing the experience of Lyublino Station on the Transcaucasian Railroad and achieved appreciable success in reducing rail car idle times.

The Central Committee of the Georgian Communist Party, having approved the initiative of the leading collective, recommended that it be disseminated throughout the entire railroad in the adopted decree. Important and useful work was done in fulfilling this decree. Moreover, there are some managers at this station who permit themselves to state that the method of operation

of Lyublino Station has seemingly outlived itself and cannot provide anything under modern conditions. What an unhealthy delusion! It must be made clear to everyone that the method of operation of the collective of Lyublino Station is a creative attitude toward labor, an inquisitive and unceasing search for reserves and is intelligent, progressive production technology organized on the basis of the latest advances of engineering science.

The experience of the workers of Lyublino Station was and remains the most powerful weapon in the arsenal of struggling to reduce rail car idle times. Its spirit must be generated at all stations.

The situation that has become established at Tbilisi-Shunting Station is typical to a specific degree for Khashuri, Samtredia, Sukhumi and other stations, where the idle times of transit rail cars have also increased and delays of trains on sidings have become more frequent due to a lack of acceptance.

We have not posed the task and we have not had the opportunity to check the work of all junctions of the railroad, but we have checked Khashuri Station.

The loading plan here was fulfilled by 90 percent, while the unloading plan was fulfilled by 89 percent, the idle time of transit rail cars exceeds the norm by 3.3 hours, while the idle time of rail cars for loading operations exceeds the norm by 4.2 hours. A total of 60 disruptions of labor and productive disciplining was noted at the station during the year. Crimes related to export of fruits for speculative purposes beyond the republic boundaries by false documents occurred.

The station administration and management of the Tbilisi Division are not devoting the proper attention to creating normal working conditions for the railroad workers. There are no recreation and eating rooms, no cloakrooms, showers, dining hall and so on at Khasuri No. 2. There is no foot path between Khasuri No. 1 and Khasuri No. 2 Stations and the station workers walk along the tracks, violating safety practices.

It is worth discussing this scornful attitude of the administration toward the needs of the labor collective.

The travel speed of trains has dropped sharply on the railroad. Many causes are known which have a negative effect on train traffic. But if we talk about the main causes, these are failure by the stations to accept trains and the shortage of carrying capacity. All the capacities have already been completely exhausted on some sections and a further increase of train travel speed is impossible without implementation of capital measures.

We are closely approaching the question here which obviously interests the railroad workers most of all -- construction of second tracks. We of course have lagged behind in this matter.

Since funds for construction of second tracks, development of stations and terminals and other measures related to increasing the traffic and carrying capacity of the railroad were allocated in insufficient dimensions during the first 3 years of the 10th Five-Year Plan, the Central Committee of the Georgian Communist Party felt it necessary to pose these questions to the CPSU Central Committee.

Upon instructions of the CPSU Central Committee, measures to reconstruct the Transcaucasian Railroad and to reinforce its technical base were specially considered by the USSR Council of Ministers, which obligated Gosplan of the USSR jointly with the ministries of railways and transport construction to consider and solve the problems posed by the republic.

We now have the decision of Gosplan of the USSR -- an authoritative document, where the volumes and deadlines for construction of the main railroad objects, including second tracks, are scheduled. Fulfillment of the adopted decision must be monitored and all the developed measures must be implemented.

However, it would be unobjective not to recognize that even those inadequate funds which were allocated to the Transcaucasian Railroad for capital construction are being unsatisfactorily assimilated. Thus, the Zaktransstroy Trust [Transcaucasian Construction Trust] underassimilated 2.5 million rubles. Since the beginning of the five-year plan, there has not been a year that the builders coped with the plan for putting second tracks into operation.

They say that the chief of Tbiltonnel'sstroy comrade V. D. Gotsiridze is grievously hurt when he is reminded that 100 years ago engineer Rydzevskiy had just as much time for construction of the complex 4-kilometer Suramskiy tunnel as he has for construction of a 1-kilometer tunnel at the Mtskheta-ZaGES span. But facts are stubborn things!

We feel that, beginning in 1980 appropriations for railroad construction throughout the republic, including the laying of second tracks, will increase. The planning and construction organizations and also the operators should not fail to make the proper conclusions from this fact and should be prepared for higher rates of construction work.

Preparing for the meeting of the most active members, the Central Committee of the Georgian Communist Party requested the Department of Railroad Operation and Rail Car Management of the Georgian Polytechnical Institute to analyze the causes for deterioration of the operating work of the Transcaucasian Railroad and to provide scientifically based recommendations.

The department turned its attention to one important circumstance.

The railroad is unable to completely utilize the carrying capacity on some spans where second tracks are being laid since the passage of trains is limited by the limited carrying capacity of the stations. In other words, problems of increasing the carrying capacity of the railroad are being solved simply and there is no systems approach. It is obvious that this



occurs due to the fact that the beginning of construction is not preceded by extensive and qualified technical-economic justifications. To approach such questions superficially is impermissible. Otherwise we can construct second tracks, but we will not be able to increase the actual dimensions of train traffic.

I request that you understand me correctly. The Central Committee of the Georgian Communist Party is a staunch supporter of second tracks over the entire length of the mainline from Tbilisi to Sukhumi, but this work should be carried out in a complex manner, simultaneously with all accompanying work.

The time has come to talk about problems of organizing train traffic.

Many stations validly complain of the frequent disruptions of the train-forming plan, which increase the volume of shunting work and lengthen the idle times of rail cars. The railroad administration frequently overlooks these facts, manifesting inappropriate liberalism with regard to violators of production discipline. The enormous flow of statistical work leaves little time for hands-on management.

We feel that an indicator of superficial management of train traffic is the fact that the percentage of empty runs of rail cars to loaded cars comprised 36.5 percent with a planned 34.2 percent and increased by 1.8 percent during 3 years. It turns out that the rail cars are frequently run empty. And after all, there is a shortage of rail cars in the country and only short-sighted managers can behave like this.

The traffic service is obligated to fundamentally change the style of its work and to take an active part in the stations' activity.

The managers of the divisions, primarily of the Tbilisi and Samtredia, are primarily the guilty parties in deterioration of the operating activity of the railroad. They stand closer to production and have the total power and necessary funds not only to correctly supervise their personnel, but also to solve problems of developing the economy.

However, having been captured by the flow and expending a large part of their time on various types of meetings, especially selection rollcalls, the division managers are inoperatively and sometimes unqualifiedly solving problems of managing operational work.

You can rarely find a station today which has not experienced difficulties in completing the switch operator staff. The work is difficult, responsible and low-paying and young people do not willingly become switch operators. Science long ago solved this problem. Industry produces serial equipment for electric centralized control of switches. But for some reason the conversion to electrified switches is being drawn out in the Samtredia and Tbilisi Divisions.



A total of 789 access tracks of industrial enterprises, construction, supply and other organizations with a freight traffic turnover of more than 1,600,000 rail cars annually, including 573 access tracks with freight traffic turnover of 1,147,000 rail cars in the Georgian SSR, are adjacent to stations of the Transcaucasian Railroad. The total length of the access tracks comprises 1,127 kilometers, of which 896 kilometers are in the Georgian SSR.

Approximately 65-70 percent of rail car loading and unloading is accomplished on spur tracks through the facilities of enterprises and organizations. The high specific weight of freight operations on spur tracks indicates the significant effect which proper organization of freight operations by the freight recipients and dispatchers can have on reducing the idle times and accelerating the turnover of rail cars.

To our great sadness, only 80 spur tracks or 14 percent of their number in the republic established a norm of rail car idle times in 1978. The average rail car idle time comprised 5.6 hours with a norm of 4.2 hours. A total of 188,000 rail cars was delayed with above norm idle time of 1,800,000 rail car-hours, for which 1.7 million rubles was paid in fines. The losses to the national economy comprised 1,250,000 tons of unshipped freight. The Ministry of the Construction Materials Industry poorly manifested itself, delaying 31,000 rail cars for 302,000 rail car-hours, the Ministry of Construction had a figure of 17,000 rail cars for 62,000 rail car-hours, the Ministry of Procurement had a figure of 14,000 rail cars for 153,000 rail car-hours and the Ministry of Rural Construction had a figure of 2,300 rail cars for 38,000 rail car-hours.

The CPSU Central Committee in its decision on the work of the Elektrostal' Enterprise of Industrial Railroad Transport pledged to implement measures to combine the dispersed agency transport shops. Four years have passed since publication of this decision. However, almost nothing has been done throughout our republic to organize transport associations, if one does not count some measures implemented by the Ministry of Construction.

Nonuniform delivery of freight has a negative effect on rail car idle times. Many recipients do not even attempt to organize the arrival of freight by balancing their capabilities in the part of the spur track, warehouse capacity and labor resource front. As a result, the spur tracks are almost inactive during the first half of the month, while at the end they are panting from a flood of freight.

A number of measures has been taken during the past few years to increase the level of mechanization of loading-unloading operations. According to data of TsSU (Central Statistical Administration), 85 percent of loading and 89 percent of unloading on the spur tracks in the republic were accomplished by the mechanized method. But now, when measures on complex mechanization of loading-unloading operations and even automation of them are being intensively carried out, this level may not be regarded as adequate. The level of mechanized loading and unloading must be increased to 95-96

percent during the next 2-3 years. However, there is a specific category of freight which mechanization has left almost untouched.

As soon as we touched on agricultural products, it should be noted that their loading into rail cars is very poorly organized. The procurement organizations of the republic do not have modern warehouses with spur tracks and facilities for complex mechanization of grading and loading of vegetables and fruits. There are no suitable approaches to the loading points for motor transport.

Whereas these deficiencies were not evident previously with the small volumes of vegetable and fruit delivery, now when state procurement and shipment reach hundreds of thousands of tons, the effect of negative factors has sharply intensified. Freight operations are being extended, the idle times of refrigerated sections are increasing and the fruits are losing quality while awaiting shipment.

Imagine yourself in the place of the kolkhoz worker who has grown a rich harvest of cabbage and tomatoes with persistent labor, has loaded them onto vehicles, delivered them to the station and here the vegetables idly lie under the scorching rays of the sun while awaiting loading until they become unsuitable. This pattern can kill the desire to grow vegetables and fruits.

The Ministry of Agriculture jointly with the administration of the Transcaucasian Railroad are obligated to eliminate neglect of the spur and warehouse management. Measures should be noted and means should be sought so that the main loading stations be provided with everything required for grading, packing and loading of agricultural products rapidly, in an organized manner and under any weather conditions during the 11th Five-Year Plan.

We feel that these very resolving questions should become the subject of discussion and should be monitored by the Transport Committee of the Central Committee of the Georgian Communist Party.

It should be noted that this committee carries out extensive and universal work to render assistance to transport and that, in February and March the Transcaucasian Railroad accelerated the turnover of rail cars is a specific service of the committee. However, the activity of some staffs has been incorrectly organized. They have substituted thoughtful, extensive organizing work with administration. And after all we have a remarkable example for organization of staff work -- the experience of the Chelyabinsk Obkom of the CPSU, the industrial enterprises and the economic organizations of this oblast, which received a high mark in the decree of the CPSU Central Committee. The party organizations of Chelyabinskaya Oblast jointly with the economists thoroughly studied the narrow points of transport and worked out a plan of organizational-technical measures for each enterprise, directed toward increasing the efficiency of transport operation. These plans, coordinated with the corresponding ministries, are being persistently implemented under the eye of party organizations. It is quite natural that

this extensive work yielded positive results. There are now no enterprises in Chelyabinskaya Oblast that are not fulfilling the norms of rail car idle times, while many of them are even achieving an economy of rail car-hours.

We should extensively disseminate the initiative of the party organizations of Chelyabinskaya Oblast in our republic. The party obkoms, gorkoms and raykoms are obligated to equip themselves with this remarkable experience and to order step-by-step the matter of using rolling stock on the spur tracks. Incidentally, they can rely in the important matter not only on the experience of the Chelyabinsk workers, but also a number of our leading enterprises. The Chiaturmarganets Mining Combine, Gruzugol' Production Association and Tbilisskaya GRES are handling rail cars without any above-norm idle times whatever. In 1978, the Rustava Metallurgical Plant emerged among the ranks of these leading enterprises, to our common joy. And quite recently matters were proceeding so-so with the metallurgists. But if such a large enterprise, having the highest freight traffic turnover throughout the republic, can solve the problem of using railroad rolling stock, it is obviously within the power of other enterprises.

The main condition in solving this problem should be regarded as organization of operations by a unified production process so that mutual assistance and support are felt in the actions of industrial and transport workers rather than agency disconnection and antagonism.

In this regard I would like to touch on the interaction of rail and maritime transport. Let us take, for example, the Poti Maritime Port. It is operating well. The port collective is systematically fulfilling the cargo handling plans, is reducing the ship idle times and is improving economic and financial indicators. The collective of the Poti Railroad Station is also working well. The great service of this collective includes the fact that it has reduced rail car idle times compared to the established norms.

They work well separately, but their joint operation has not yet fused. The port and station fulfill the shipping plan for imported and transloaded goods during rare time segments. But the plans are disrupted during the majority of months. The port accuses the station of failure to deliver rail cars, while the station accuses the port of not assimilating the delivered rail cars. There is no end to the quarrels and state interests suffer from this agency bickering.

We have an example of how these quarrels should be solved, namely from party positions. We have in mind the experience of the Leningrad Transport Terminal, which was approved by the CPSU Central Committee.

The Leningrad workers organized work in freight transshipment by a continuous plan-schedule worked out by computer equipment based on a unified production process.

Sufficient time has passed since we have familiarized ourselves with the details of the Leningrad workers' experience and we have even traveled to study it on the spot. However, it is far from practical realization.

They say that the Poti Port is utilizing the plan-schedule only from the direction of the sea, but coordinated work is not being achieved from the direction of the railroad. But then this is no longer the experience of the Leningrad Transport Terminal since the main idea, which includes the clear mutual effect of two types of transport at the junction point, has been lost from it. There are data that this matter is organized better at Batumi. Batumi seamen should be supported and their leading experience should be introduced universally.

In criticizing the ministries and agencies, enterprises and organizations for their impatient attitude to rail car idle times, should one not consider how the railroad itself is organizing freight operations? After all, loading and unloading rail cars on the station tracks and at the warehouses has been entrusted to the railroad itself by the railroad Charter. However, the railroad now encompasses no more than half this freight traffic turnover according to approximate data. Problems of 100-percent central traffic control of freight export and import at Tbilisi, Kutaisi, Sukhumi, Batumi, Samtredia, Gori and other stations are not being solved and the coordinated plans for development of centralized shipments, including stations of rayon scale, are not being implemented.

For the indicated reasons, freight handling by railroad facilities is not increasing.

According to data of check weighings, which the railroad stations conduct selectively, 30.7 percent of rail cars are shipped from the loading points with an underload compared to the technical norms or with a weight indicated in the bills of lading are less by an average of 1.3 tons.

To more specifically imagine the losses inflicted to the state by under-utilization of the carrying capacity of a rail car, let us cite the following examples: on 7 October 1978 seven open cars loaded with scrap with underload of 194 tons, i.e., an average of 28 tons per car, arrived at Rustava from the Gachiansk Base of Gruzvtorchermet [Georgian State Trust for the Procurement and Processing of Secondary Ferrous Metals]. A month earlier 25 rail cars were underloaded by 161.8 tons of inert materials, or 6.5 tons per rail car, at the Darkvetsk Industrial Construction Materials Association. You agree that this practice can be qualified in no other way than antistate practice.

There is no doubt that a specific part of the deficiencies in the activity of rail transport is caused by its extreme loading and operations, as they say, on the edge of its technical capabilities.

We could facilitate the operation of the railroad and on this basis to achieve improvement of its quality if we persistently engaged in problems of making shipments more efficient. Problems of coordinating transport activity, that is, of correct distribution of work between its different sectors, are directly related to making shipments more efficient.



The Khashuri-Batumi oil pipeline became operational in 1974, but as was later determined, with serious deficiencies. From the first days of operation of the oil pipeline, both rail transport and petroleum supply organizations felt a great easing and economic advantage. Unfortunately, the defects committed in construction put this type of transport out of operation in 1976. The pipeline has not operated since then, i.e., for more than 2 years, pumping is not being carried out and diesel fuel and other products are being delivered to Batumi in tank cars. This is costing Gruzglavneftesnabsbyt [Georgian Main Administration for the Marketing, Transportation and Supply of Petroleum and Petroleum Products] millions of rubles annually. The railroad is being overstrained by work above its capability, while a structure which cost the state 31 million rubles and has been called upon to solve a serious transport problem is still idle.

Gruzglavneftesnabsbyt is attempting to justify itself by the fact that no cable has been laid along the pipeline and there are no communications. This of course is a serious argument, but could not this problem be practically solved in the republic after such a long period of time if they really applied themselves to it?

Local interests should be placed higher by the apparatus of the Council of Ministers, Gosplan and all ministries in problems of making freight shipments more efficient and they should be solved from state positions.

The management of the Transcaucasian Railroad is enormous and dispersed over thousands of kilometers. The cost of its basic funds reaches 1,300,000,000 rubles. There is everything here -- from modern rolling stock, bridges and tunnels to housing, schools and hospitals.

Tens of thousands of people are involved in maintaining this economy in a working state and of providing for further development. They are doing a very important necessary thing. After all, without well organized economy it is impossible to provide a high level of operating work, a continued increase of the rate of shipments and safety for people and freight.

On the whole, the management of the railroad is in a good state. But there are also serious deficiencies. According to annual report data, the percentage of "sick" locomotives is below the established norm. However, cases of deterioration and failure of locomotives and unscheduled and repair between trains are still frequent. There is information that data on the time of sending electric locomotives for repair and the time of coming out of repair are skillfully manipulated at some depots. Simply speaking, they are engaged in eyewash. Such actions must be sharply discussed and must be stopped.

Electrification of the Transcaucasian Railroad helped to solve many important transport and economic problems, including that of increasing the carrying capacity of the mainline. But, having created favorable operating conditions for the railroad workers, the state requires that they carefully use and economize electric power. However, overconsumption of energy for train



traction by 0.4 percent was permitted last year. And this comprises 3.4 million kilowatt-hours. Think about this figure!

Science and technology have given the railroad workers many excellent facilities for restoring electric power, but they are being poorly utilized.

Last year there were 111 brigades of railroad workers on the Transcaucasian Railroad that overconsumed electric power.

The efficiency of utilizing rolling stock depends to a considerable degree on repair and timely provision with spare parts, interchangeable parts and subassemblies under the conditions of the sharply increasing volumes of shipments and an increase of the requirements on the work of railroad transport.

Some industrial enterprises of our republic are participating in solution of the All-Union problem of increasing the technical level and operating efficiency of the rail transport of the country. We have in mind the 'Elektrovozostroitel' Production Association and one of the oldest repair enterprises of the Ministry of Railways -- the Electric Locomotive and Rail Car Repair Plant imeni Stalin.

These two enterprises are now faced with enormous problems. As is known, the CPSU Central Committee and the USSR Council of Ministers quite recently adopted an important decree, according to which reconstruction of the plants was provided to increase the output of locomotives and the volume of repair of railroad rolling stock.

It is planned to bring locomotive output up to 200 annually during the next five-year plan at the Electric Locomotive Building Plant imeni V. I. Lenin. An increase of these capacities requires that large-volume and technically complex operations be carried out in reconstruction of the enterprise. Therefore, the Tbilisi Gorkom and the Secretary of the Central Committee of the Georgian Communist Party Comrade Z. A. Chkheidze must not only firmly monitor the course of reconstruction but, which is most important, must increase the quality of construction and installation work. Here we should manifest high demandingness.

Serious work must also be carried out at EVRZ imeni Stalin (Electric Locomotive and Rail Car Repair Plant imeni Stalin). The reconstruction must be completed here, it is desirable to reduce its deadlines and to think about accelerating the introduction of new capacities.

Implementing the program of reconstruction and modernization, development and output of new electric locomotives which meet modern All-Union and worldwide standards will undoubtedly have a positive effect on the indicators of the Transcaucasian Railroad.

Implementation of this program is in the interests not only of the Transcaucasian region, but of the entire country.

Comrades! We feel it necessary at the given meeting of the most active members to carry on an informative conversation about passenger shipment. Their significance is well known. Millions of Soviet people judge the state of affairs in transport by the level of organization of passenger traffic. This problem has frequently been the subject of keen discussion at the bureau of the Central Committee of the Georgian Communist Party. But the situation has not corrected itself.

Let us begin with the fact that last year the railroad did not cope with the task on passenger traffic turnover. And at the same time many citizens knew that acquiring a ticket for the train immediately became a difficult problem to solve.

Why then is the plan not being fulfilled? The reason we feel is single -- concealment of free seats and hauling passengers without tickets.

A letter from communist comrade Georgiy Konstantinovich Marsanov recently arrived at the Central Committee of the Georgian Communist Party, in which disgraceful events are described, the witnesses to which had to be passengers of the Tbilisi-Moscow train. Hauling passengers without tickets, lack of sanitation, drunkenness and begging -- all these sickening facts occurred in the "staff" car of the Moscow train. The guilty ones were punished, but the impression is created that the described pattern is typical to some extent.

As soon as the rolling stock of train Nos. 13-14 was transferred from the Moscow reserve of conductors to the service of the Tbilisi reserve, the rail cars ceased to be gathered along the route, disappearing in many of them, the state of the sleeping car linens deteriorated, facts of hauling passengers without tickets became more frequent and so on.

Here is one of the examples.

On 28 November, seven ticketless passengers were found in car No. 12, two in car No. 13 and eight in car No. 14 on the Sukhumi section on the Tbilisi-Moscow train. All these ticketless passengers occupied free seats, the presence of which was concealed from the traffic control service. The indicated train was not once checked by controllers over the entire route from Tbilisi to Sukhumi.

If this is prevalent on the Moscow train, which it would seem should be under special monitoring of the managers, it is easy to imagine the state of passenger service on local trains or on electrified sections.

In order to extensively analyze this matter, we had to resort to the assistance of the Council of Public Opinion attached to the Central Committee of the Georgian Communist Party. After all, it is very important to know what the Soviet people themselves think about the level of organization of passenger traffic, which is accomplished mainly to meet their needs.

Only part of those asked gave a positive answer to the question "Are you satisfied with organization of ticket sales?" People are losing from 1 to 2-1/2 hours in line and naturally this loss of time cannot be tolerated by anyone.

In the opinion of the questioned citizens, rudeness and tactlessness on the part of the ticket agents and some station workers is an ordinary phenomenon. There were also passengers who stated that "there are as many free seats in the car as you want but until you hand over 5-10 rubles, the ticket agent will not sell you a ticket."

A victim of the extortion even became the worker who did the survey: when he bought a ticket for the Tbilisi-Telavi train, he was shortchanged by 90 kopecks. And secondhand dealers offered their services to passengers attempting to acquire a ticket for the Tbilisi-Sukhumi train since the ticket agents had stated that there were no tickets.

In search of customers, some conductors scurry around near the railroad ticket offices, talking the passengers in view of everyone not to take tickets. On 24 November 1978 it was impossible to acquire tickets for the Tbilisi-Poti train at the ticket offices of the Tbilisi Station, while in fact there were 105 empty seats at the moment the train departed.

The answer to the question "How does the conductor usually meet you when getting into the rail car?" is indicative. A significant part answered "indifferently" and a smaller part answered "unfriendly" and "friendly."

The sanitary condition of the rail cars were recognized as satisfactory by only a few.

The frequent delays of the trains, the neglected state of the sleeping car linens, the poor heating, the malfunctioning of windows and doors of the rail cars, cheating in the snack bar and restaurants, the insolent behavior of hooligan elements, especially in the Tbilisi-Gardabani electric section, cause many complaints.

The results of the survey can be determined by the answers to the following final question: "How do you feel that the struggle with deficiency and violations is being carried out in railroad transport?"

Some of the passengers answered that this struggle is being carried out well, a significant part feel that it is poor, while there were also those who simply did not answer the question. Thus, one can conclude that most passengers are not satisfied with the state of passenger traffic.

Such a negative evaluation of passenger traffic may possibly seem unobjective to some comrades, even more so since new stations, pavilions and high platforms are being constructed on the railroad, the rail car repair base is being expanded and rolling stock is being continuously renovated. It would seem at first glance that everything is being done for the passengers. But

passenger traffic is that section of operations where the old proverb: "The place does not paint the person, but the person paints the place" is especially valid.

Many workers who are called upon to serve the passengers, whether on the trains or at the stations, do not have adequate tactfulness, elementary culture and education.

It has frequently been suggested to the managers of the railroad and sections in the Central Committee that the conductor staff be made up of females and that the old workers who have made mistakes be replaced by young people and komsomols.

We frequently ask ourselves with an uneasy feeling the question: what has caused this situation in organization of passenger traffic? We feel that the main cause should be sought in the inertia of the managers and in the absence of a genuine, enthusiastic and active struggle with these negative phenomena.

Some managers give more the appearance that they are struggling with neglect of passenger traffic than they are waging a real struggle with it. These managers obviously think that the matter was permitted long ago, much dirt has accumulated, which is good since it will hide me and it is better to stand aside. But this form of thinking by its very essence is counterindicative of a communist. We cannot forgive the social passivity of the rank and file Soviet citizen who sees disorder and violation, but cowardly turns away from them. And really can one forgive such a manager-communist?

The serious deficiencies that have taken route in passenger traffic cannot be considered separately from the overall state of the struggle with negative phenomena on the Transcaucasian Railroad.

We have become convinced that the uncompromising struggle which the communists of Georgia have organized on the basis of the historical decision of the CPSU Central Committee on the work of the Tbilisi party gorkom against harmful remnants in the consciousness of the people, misuse of authority, bribery, embezzlement and other socially dangerous phenomena has fallen by the wayside for the railroad.

In confirmation of the foregoing, one may cite many proofs both large and small. Cases of clear combinations, speculations and misappropriation were determined last year at the Samtredia rayORS [Rayon department of workers' supply], which were so large that the bureau of the Central Committee of the Georgian Communist Party was forced to make a number of railroad managers strictly answerable for them.

It is indicative that all these crimes were not revealed by the monitoring-inspectorate apparatus of the railroad, but by the militia bodies.



Is this really not proof of formally waging a struggle with negative phenomena?

You see the state in which part of the agricultural equipment and trucks is delivered to the station of destination. The military guard and transport militia sometimes do not ensure delivery of freight intact and preserved. The criminals frequently "dispossess" agricultural equipment and other types of goods. Such a disgraceful phenomenon should be ended and the most decisive measures should be taken.

The problem of proper selection and disposition of personnel is the key in the struggle to create a situation on the railroad which would eliminate thievery, bribery, attachment, eyewashing and other phenomena foreign to our morals.

Consequently, both the struggle with this disgraceful evil and a real and principal struggle should be waged by the railroad workers themselves, primarily by the managers without counting on the fact that the militia will arrive, will trap all thieves and will clean the railroad of them. The forms of this struggle may be diverse, but its main content should be comprised of tireless work on education of people.

We must devote more attention to ensuring traffic safety.

They say that railroad workers are more or less attempting to qualify crude violations of technical operating rules as rejected material, considering it somehow as not guilty, ordinary in their work and unworthy of serious attention.

It is obvious that this term does not fully reflect the dangerous events in the form of collisions of rolling stock and derailments, receiving trains on occupied track, damage to rail cars and locomotives which occur in transport and which are covered by the concept "rejected material."

We regard the state of affairs in the field of traffic safety as very alarming and to some extent typical for the Transcaucasian Railroad, since it, as a focus, concentrates its main deficiencies in the work of transport, poorly established monitoring of execution, a weak or rather low efficient struggle to consolidate labor discipline, overestimation of the capabilities of administrative measures of action and the absence of painstaking work in education of cadres.

A total of 4,102 penalties were imposed on the railroad in 1978.

All the managers of enterprises of the railroad, i.e., leaders who have been given the exclusive right by the state to punish people, are located here at the meeting of the most active members. I would like to appeal to them with the following question: distinguished comrades, have you really not noted, so to speak, the fatal coincidence -- the more you punish people, the more frequently discipline is violated? Are you not obligated to think



about this phenomenon? It has long been known that authority is a sharp weapon and it should be used delicately, artfully and with intelligence.

You may ask: what then, should violators of discipline be given amnesty and forgiven? First, there are different types of violations. In some cases a frank and serious conversation with a working man makes a greater impression on him than a paper with a reprimand; second, there are other means of moral and material action on workers. The high art of management includes knowing how to prevent violations of discipline in time and to create in the labor collective a climate of production attitudes which would prevent idling, drunkenness, goofing-off, insubordination of orders and violation of the Technical operating rules and the By-laws on discipline.

It is incomparably more difficult to solve this problem than to sign an order with a pronouncement of administrative reprimand. But it is more honorable to cope with it since we have no other method of reinforcing conscientious communist discipline.

The touched-upon problem of reinforcing conscious discipline among the broad masses of railroad workers has a direct relationship to the activity of the trade-union organizations.

I am far from the intention of belittling or to some extent underestimating the large scales of universal useful activity of the trade-union organizations on the Transcaucasian Railroad. However, this does not mean that we should not hold the managers of the trade-union organizations, including Dorprofsozh [Railroad Committee of the Railroad Transportation Workers' Trade], to valid accounting for the state of labor discipline and for elements of formalism in management of the socialist competition and unsatisfactory dissemination of the experience of leading workers.

We are correct in holding Dorprofsozh accountable both for the unsatisfactory state of labor protection and safety rules on the railroad.

Affairs with observing the operating conditions of locomotive brigades are extremely unfavorable. A total of 1,746 cases of violations, i.e., 666 cases more than in 1977, were officially recorded. However, reviews and checks revealed even more numerous facts of concealed violations of the operating conditions of locomotive brigades by changing the last number of the train numbers and other tricks.

A total of 1,258,000 hours of overtime work was permitted on the railroad during the year and in this case the number of overtime hours is increasing from year to year.

Soviet trade unions have been given the exceptional right to protect the interests of workers. The impression is being created that Dorprofsozh of the railroad and its line organizations are weakly utilizing the rights given to them.

The Railroad Administration should be given the service that it was one of the first in the republic to begin using computer technology to solve national economic problems.

The computer center processes an enormous volume of statistical materials. Computer technology is being well utilized in the field of planning shipments and other planning developments. The center occupies one of the leading positions in the republic in the index of machine-time utilization.

However, there is yet no basis to be fully satisfied with the work of the railroad computer center. The use of computer technology even in the enumerated sectors has not yielded a discernible result in economy of labor resources.

Computer technology yields the greatest effect of increasing labor productivity in automated control systems. But even in this field the railroad center is severely lagging.

The computer center and also most services, departments and enterprises of the railroad are experiencing ever increasing needs for support of cadres. There is a shortage of engineering personnel who know how to combine modern methods of management with solving practical problems of railroad operation under conditions of the ever increasing scope of traffic and the freight intensity of sections.

It is not worth taking time away by enumerating the duties of the management and middle sections which have not been staffed for a long time. Unfortunately, there are many of them. A number of leading specialties of mass occupations, especially traffic controllers, rail car workers, communications specialists and so on, has not been staffed. All this creates a difficult situation on the railroad and prerequisites for overtime work.

Now, in looking back, one should recognize that closing the Tbilisi Institute of Railway Transport Engineers, taking into account the needs of the new railroad construction and development of the Tbilisi Subway, was an unjustified measure.

The railroad administration with the assistance of the Ministry of Railways and the Ministry of Higher and Specialized Education of the republic must work out a plan of measures for training and retraining of engineers, technicians and workers of mass occupations.

Under the developed conditions, the significance of proper disposition and utilization of cadres is increasing incomparably. There are also deficiencies in this field. Reports are coming into the Central Committee that the managers of personnel divisions and departments are assigning workers to nomenclature duties without the agreement of the party raykom. Thus, the deputy chief of the Khashuri Rail Car Depot and the chief engineer of the Khashuri Maintenance Section were assigned without adhering to the established procedure for coordination and formulation. These facts also occur in other regions.

To intensify demandingness on the part of the raykoms, gorkoms and obkoms, it is felt that the time has come to supplement the monitored work indices of their regions by main railroad indices such as, for example, rail car loading and unloading and idle times for freight operations. One should assume that under these conditions the party managers will constantly monitor the work of transport rather than periodically. We will certainly entrust the appropriate comrades to study this problem and to present their suggestions.

It is necessary again and again to attentively and objectively analyze the situation with selection and disposition of personnel on the Transcaucasian Railroad.

The chief of the rail car section of the Tbilisi Passenger Station comrade N. N. Tokhadze, the chief of the personnel department of the same section comrade M. G. Kaladze, the chief of Samtredia Station comrade T. P. Galdava and others have recently been released from their occupied duties. This indicates that everything is still not favorable in this most important sphere, on which the moral-psychological climate in the labor collectives of the Transcaucasian Railroad primarily depends.

The significance of personnel work increases especially now during the period of the process of population exchange experienced by the railroad.

Comrade G. I. Kadagidze -- a manager having great experience and extensive theoretical and practical knowledge -- has left for a deserved rest. The deputy chiefs of the railroad and managers of almost all services have been replaced. This process never occurs smoothly anywhere. It is even more complicated to overcome in rail transport. The problem is to see that the newly advanced managers fully recognize the responsibility entrusted to them and know how to quickly develop a well-organized, I repeat, a well-organized and efficient collective on the railroad.

To do this requires that the proper style of management be developed.

You know what important attention the party is devoting to the matter of increasing the quality of management. As comrade L. I. Brezhnev noted, "neither capital investments nor new technology will yield the proper effect without good management and improved organization."

The managers of the services and divisions are wasting too much time on preparation and conducting selection meetings, replacing the capable duty apparatus. This is being done at a loss of their own direct duties: analysis and evaluation of production activity, timely determination of negative tendencies, working out measures to eliminate "bottlenecks," raising the qualifications of personnel and reinforcing labor and production discipline.

Exactingness in these problems should be increased to the maximum.

Some unsuccessful managers understand "exactingness" under the concept of abruptness, rudeness and diminishment of the human merit of subordinates. This is of course incorrect. Rudeness and insults never lead to the desired result, because they do not join the collective around the manager, but separates it; they do not inspire people to overcome resulting difficulties, but diminish the desire to work in general.

The task of providing well-organized work is of primary significance on rail transport, the diverse activity of which is clearly differentiated among sector services. One cannot forget this so as not to permit the occurrence of agency frictions and centrifugal forces.

Let there not be a single manager -- major or minor -- who does not overestimate his personal capabilities. The collective does the work and the task of the manager is to provide the proper direction to it, to organize it so that each member of the collective contributes his own skills, energy and creative inspiration to the common good.

Perhaps I am repeating the rudiments of management science, but this must be recalled since many comrades ignore these simplest truths in their practical activity.

I should talk here about the new chief of the railroad comrade L. G. Vardosanidze. The Central Committee feels that he has extensive experience, is a good specialist in the field of rail transport operation, is filled with energy and persistence and will cope fully with the work in his new position.

In his address at the November (1978) Plenary Session of the CPSU Central Committee, Comrade Leonid Il'ich Brezhnev noted: "A complex situation has developed in transport, especially rail transport. I suggest that you all directly sense this."

"I am confident that the party organizations of the republics, krays and oblasts will render the necessary assistance and support to the transport services to increase operating efficiency, to consolidate labor and production discipline and will intensify control over fulfillment of the shipment plans."

Our present meeting must be regarded as one of the measures to render assistance to transport. We have decided to convene the managing staff of the Transcaucasian Railroad, to listen to criticism and to express our opinion on a number of negative trends observed in transport in order to assist in the most rapid overcoming of them.

It is obvious that the stronger the effect of party organizations and the more active is the assistance of the party obkoms, gorkoms and raykoms of railroad enterprises, the more quickly and successfully we will resolve the problems faced by the Transcaucasian Railroad.



It should be recognized that this effect is as yet inadequate. The party organizations of the republic are doing a good job of managing affairs in industry, agriculture, in construction and in the service sphere. The time has come to turn our face to problems of party management of transport. Party work in rail transport, we feel, does not have sufficient depth and competency. Obviously, the specific and difficulty accessible nature of railroad production is felt. But if we want to set transport on solid feet, we must overcome this difficulty.

The proposal to create a railroad party raykom based on primary party organizations of the Tbilisi Junction merits attention in this regard. The Tbilisi party gorkom must study and extensively discuss this proposal and express an opinion about it.

Regardless of the organizational forms, we are obligated to improve the style of party management of rail transport and to assist it in new work enthusiasm.

A large army of communists is working on the Transcaucasian Railroad. There are now some 8,347 members and candidates to membership of the CPSU. They are combined into 201 primary and 150 shop organizations and 92 party groups. There are 12 party committees. This is an enormous force, comrades! They are obligated to actively include themselves in the struggle for progressive transformations in transport. The konsomol should be activated.

The workers of rail transport are surrounded by high respect in our country. The people render what is due to the labor occupation of railroad worker, who maintains a round the clock labor watch, frequently separated from his relatives and intimates.

Party and trade-union organizations and means of mass information -- the press, radio and television -- must implement measures to increase the prestige of railroad workers and to more fully satisfy their cultural-service demands. The railroad workers must be assisted in creation of similar management and they must be allotted suitable plots to develop gardening.

The communist party and the Soviet government devote enormous attention to the needs of railroad workers and to improvement of their material well-being. After the increase of pay to railroad workers in 1971, a new stage is now being implemented in increasing the real income of workers by increasing wages for night shift, long-service bonuses and so on.

Since we have touched on social questions, it is impossible to pass in silence the situation in which housing construction finds itself. In 1960 housing with an area of more than 40,000 square meters was constructed by the railroad. Decreasing from year to year, the construction program dropped to 17,786 square meters in 1978. A severe situation was created in elimination of barracks and basement living quarters. On 1 January 1979 there were still 128 barracks with area of 21,300 square meters on the railroad in which 1,200 families live. There are not enough schools, kindergartens and



so on. The managers of the railroad justifiably raise questions about increasing appropriations for construction of housing, schools, kindergartens and medical institutions.

Comrades! The railroad workers of the mainline still have many unresolved problems. The task is to raise the work of our glorious railroad workers to the level of the requirements of the 25th CPSU Congress and the 25th Congress of the Georgian Communist Party and the decisions of the CPSU Central Committee concerning the Georgian party organization.

The collective of the Transcaucasian Railroad is the heir of glorious combat, revolutionary, internationalist and labor traditions.

Georgians, Russians, Ukrainians, Armenians, Azerbaijani, Abkhazians, Osetians, Kurds, Jews and representatives of many other nationalities of the Soviet Union have been laboring in this solid and friendly collective for more than a century, rendering fraternal assistance to each other and solving important national economic problems.

This is a strong, international collective that has been welded together. It is capable of solving any problems!

The collective of the Transcaucasian Railroad has frequently emerged as the winner in the All-Union socialist competition. For many years it has carefully preserved an invaluable relic -- the Banner of the USSR State Defense Committee for selfless work during World War II.

The former glory of the Transcaucasian Railroad must be reborn. We must work so as to bring it to the ranks of the leading mainlines of the Soviet Union.

There is no doubt that our glorious railroad workers will do everything to implement the plans and socialist pledges of the 10th Five-Year Plan and the decisions of the 25th CPSU Congress and the 25th Congress of the Georgian Communist Party and will make a worthy contribution to the matter of building communism in our country.

#### Report on Transcaucasian Mainline

Tbilisi ZARYA VOSTOKA in Russian 19 May 79 p 4

[Article on the achievements and tasks of the Transcaucasian Mainline from the meeting of the most active members of the Transcaucasian Railroad]

[Text] A discussion developed around the report of comrade E. A. Shevardnadze. The floor is given to chief of the railroad comrade L. G. Vardosanidze.

"In implementing the planned organizing-technical measures, the collective of the Transcaucasian Railroad fulfilled the 1978 plan of loading national

economic freight under complex conditions of limited carrying and handling capacity of sections, terminals and stations," he said. "Several tens of thousands of tons of freight were shipped above the plan. Compared to the previous year of 1977, the shipment of freight was increased by 4.5 percent. The plan on freight traffic turnover was overfulfilled. Overfulfillment of the annual plan on shipment of such important goods as fuel, construction, chemical and others was provided."

Comrade Vardosanidze then dwelt in detail on the deficiencies in the work of the mainline.

In 1978 the railroad did not provide fulfillment of the established norm of rail car turnover. As indicated by analysis, discernible losses were caused by an increase of rail car idle times both in freight operations and at technical stations.

It would seem that these and other similar phenomena would have alarmed the managers of the railroad divisions and the traffic service. After all, it is they who are obligated to constantly monitor the work of the stations, to extensively analyze the causes of underfulfillment of plans and to implement timely measures to correct the situation. However, instead of a business-like, engineering approach to solution of operational problems and correct organization of the operational work, they frequently limit themselves only to gathering data and seeking various reasons to justify their own poor work.

Only the collective of the Yerevan Division of the railroad (the chief of the division is comrade Kandil'yan) ensured fulfillment of the norms of rail car turnover.

Specific work directed toward increasing the level of fulfilling the train traffic schedule, especially of passenger trains, is being conducted on the railroad. However, many delays of trains are still being permitted. Last year 565 passenger and 187 suburban trains were taken off the schedule to the fault of workers of the Samtredia Division, 855 passenger and 625 suburban trains were taken from the schedule on the Tbilisi Division and 337 passenger and 229 suburban trains were taken off the schedule on the Yerevan Division.

The managers of the railroad divisions, stations, locomotive and rail car depots, signalling and communications and track maintenance sections, energy supply sections and other subdivisions must fundamentally change their attitude toward fulfilling the schedule of train traffic.

It is known that improvement of rail car turnover and fulfillment of the traffic schedule largely depend on clear, well-organized work of the traffic control apparatus of the railroad divisions and on how the duty officers in the division and the train traffic controllers provide progress of rail car flows. However, some managers of the railroad divisions do not devote the proper attention to the work of traffic controllers. Instead of organizing and educational work and increasing the feeling of responsibility for the entrusted matter, they duplicate the work of the traffic controllers.

It is generally known how important fulfillment of the tasks on financial-economic indicators is in the activity of each enterprise, but there are also many deficiencies in this area. The railroad underfulfilled the task on balanced profits for last year. Mismanagement in the use of labor, material and monetary resources caused an increase of operating expenses. Additional wages worth 213,000 rubles were paid for overtime work and idle times alone throughout the Santredia Division of the railroad and wages worth almost 500,000 rubles were paid throughout the Tbilisi Division. Underfulfillment of the profit plan with a simultaneous increase of basic production funds caused underfulfillment of the profitability task.

Lack of support in preserving perishable goods continues to be a serious deficiency in the work of the railroad. This occurs because the adopted measures are obviously not adequately effective. Because of this, the preservation of perishable goods was not improved last year. The preservation of perishable goods at the Tbilisi Sorting, Tbilisi Terminal, Khashuri, Santredia, Yerevan and some other stations is extremely unsatisfactory.

Work on the spur tracks of industrial enterprises is poorly organized. More than 432,000 rail cars were overdelayed on the spur tracks. Their total idle time comprised 3,710,000 rail car-hours.

Some ministries and agencies of Georgia and Armenia frequently disrupt the principle of efficient use of rolling stock.

Comrade Vardosanidze talks about the measures adopted to consolidate labor and executive discipline which made it possible to achieve a change and to appreciably improve the operating work since the beginning of this year.

Constant attention is being devoted to finding and use of available reserves. The leading experience of the Chelyabinsk and Leningrad workers and of the collective of the Moscow Mainline to increase the weight and length of freight trains is being introduced extensively. Friendly coordinated work with seamen of the Batumi Maritime Port has been organized. Transshipping and imported goods are dispatched without delays, due to which the ships are handled ahead of schedule. In turn, the seamen are providing unhindered reception of freight from the railroad. Close cooperation with the truck drivers is also producing positive results.

"The primary task is to dependably strengthen that achieved," notes comrade Vardosanidze. "We are now intensively preparing to carry out summer passenger traffic and also export of the agricultural products of the new harvest at the proper level."

A further rise and improvement of work and successful solution of all the problems faced by the railroad collective depend entirely on the cadres, to which we should devote the appropriate attention, should constantly be concerned about improving the housing-service conditions, should study the needs and demands of our workers and should satisfy their legal demands.

At the same time we will continue to struggle against all negative phenomena and to strengthen labor and production discipline. We are doing everything to maintain the moral-psychological climate at the proper level in the international collective of the railroad numbering in the thousands.

The First Secretary of the Abkhazia Obkom of the Georgian Communist Party B. V. Adleyba speaks.

"The main deficiency in the worth of rail transport is unsatisfactory utilization of rolling stock at practically all stations of Abkhaziya. The fact that the above-norm rail car idle time increased and reached 216,000 rail car-hours compared to 1977 causes special alarm," he says. "One of the reasons for the poor utilization of rolling stock in Abkhaziya is the extreme obsolescence of the material-technical base of our stations and auxiliary services and the lack of the necessary mechanisms and equipment."

The absence of a modern rail car management base, which prevents proper preparation of passenger trains for the trip, and the wear and tear of rail cars even in the composition of the firm train "Abkhaziya" has a negative effect on service to vacationers and tourists.

Taking into account the imminent growth of the economy of Abkhaziya and the sharp development of tourism, including international tourism, comrade Adleyba raises the question of restoring the Sukhumi Division of the railroad.

One of the main directions of improving the work of the railroad workers of Abkhaziya is significant activation of the party organization activity to increase its influence in labor collectives, to intensify the vanguard role of communists and better disposition of cadres in the most crucial sections of production and in mobilization of all mainline workers to solution of the problems faced by them.

The creation of junction party committees may also contribute to a significant degree to improvement of setting up party-organizing and ideological-educational work of primary party organizations of the railroad workers of the autonomous republic in light of the decree of the CPSU Central Committee "On further improvement of the ideological and political-educational work," and to greater coordination and purposefulness of their activities.

The pioneer in electrification of the mainlines of the Soviet Union is the Khashuri Locomotive Depot. The era of railroad electrification began here on 16 August 1932.

Speaking at the meeting, engineer-instructor of this depot V. F. Vorob'yev says that during the far-off 1930's, it was designed for operation and repair of six-axle electric locomotives. The fleet now consists of electric locomotives, diesel locomotives and electrified sections. It is clear that the existing production areas are incapable of providing high-quality maintenance and upkeep of the locomotive fleet. The question on reconstruction



of Khashuri Depot has been raised for 6 years and it was resolved positively only this year.

The chief of the Yerevan Division -- the deputy chief of the railroad A. A. Kandil'yan -- talked about the successes of the railroad workers of Armenia and about the work which was conducted to improve the production processes, to outfit the stations and enterprises of the railroad division with new equipment and about measures carried out to improve passenger service at the stations and on trains.

The chief of the Georgian Maritime Shipping Company G. M. Chkheidze talked about the cooperation of the seamen and railroad workers, raised the question of transfer of the Batumi Passenger Station to a new spot since it is extremely small and inconvenient and talked about the fact that all freight handling processes on the port spur tracks must be mechanized.

The secretary of the Tbilisi Gorkom of the party B. D. Makharashvili talked about the need to systematically direct work and to coordinate mutual relations between the railroad workers and enterprises and agricultural regions. He focused the attention of the participants of the meeting of most active members on problems of improving organization of passenger traffic, of intensifying educational work among railroad workers and of reinforcing discipline.

The secretary of the party organization of the Tbilisi Rail Car Section T. Sh. Grigalashvili devoted his address to problems of passenger service skills.

Many years of joint intensive work to erect railroad and other objects link the builders of the Zaktransstroy Trust and the workers of the Transcaucasian Railroad.

This year the Zaktransstroy Trust should carry out work worth more than 27 million rubles. Construction of second tracks on the most freight-intensive waysides of the Tbilisi-Khashuri-Samtredia sections must be completed, yet another Dzegvi-Mtskheta wayside must be put into operation and so on. The builders must be assisted by the customer -- the Transcaucasian Railroad, which should allocate the necessary funds to strength the production base and also must be assisted by the Kavgioprotrans Planning-Research Institute. The manager of Zaktransstroy Trust of the Ministry of Transport Construction of the USSR A. N. Saganelidze talked about this.

The acting chairman of the railroad trade-union committee of rail transport workers B. A. Sogbetov spoke.

"Many trade-union committees of the railroad, engaging in a business-like manner in organization of a socialist competition and creatively approaching development of cultural-mass and educational work in the labor collectives, have achieved specific success in fulfilling the planned tasks and in raising the cultural and ideological level of the railroad workers," he says. "The patriotic call of the Moscow railroad workers, who accelerated transport of



national economic goods and who increased the carrying capacity of the most freight-intensive sections by increasing the weight and length of trains, has caused a new impetus of creative activity in all the collectives."

Arming themselves with the experience of the Moscow workers, the railroad workers of the Transcaucasian Mainline have achieved appreciable success in freight and operating work.

Comrade Sogbetov devoted much attention in his address to further development of a socialist competition among the railroad workers.

The local trade-union organizations are largely faced with implementing a further increase of the role of cultural-educational institutions in the life of the many thousand collective of the railroad. They should become the true focal areas of culture and intelligent leisure time of the workers and propagandists of the leading experience and advances of science and technology, as is required by the decree of the CPSU Central Committee for further improvement of ideological and political-educational work.

The chief engineer of the signalling and communications service B. S. Naumov indicated the great deficiencies in the work of the communications services. Many operations continue to be accomplished manually and the proper measures are not being implemented to equip the stations with electric centralized traffic control devices at such freight stations at Lilo, Chiatura, Batumi, Poti, Gurdzhaani, Tsnoris-Tskali and many others.

The minister of railways of the USSR I. G. Pavlovskiy gave an address at the meeting of most active party-economic members.

"You know well the results of the first quarter and April of this year that have been achieved by rail transport," says comrade Pavlovskiy. "There is also a number of deficiencies among the successes. No task is now more important to us than to mobilize all the railroad workers to eliminate them and to strengthen state discipline and unconditional fulfillment of the current year's plan. The center of gravity of all organizing and mass political work should be concentrated on fulfilling the plan in all indicators without exception. This is the requirement of our party."

The lessons of the past winter are very instructive. The complex weather conditions were undoubtedly reflected both in the results of the work of industry and of rail transport. On the one hand, we had examples of exceptional organization, discipline and clear interaction with related workers and recipients and dispatchers of freight, and on the other hand we had a directly opposite attitude to the matter. The explanations of the managers of railroads operating unsatisfactorily were heard a few days ago at the expanded meeting of the board of the Ministry of Railways of the USSR and specific methods to eliminate the permitted lag in shipment and on unconditional fulfillment of the annual plan were determined.

In giving the proper due to achieved successes, the party teaches us in the spirit of Leninist traditions to concentrate our attention on unresolved problems. A good situation has been created for successful work on the Transcaucasian Railroad this year, although there are no and can be no bases for complacency.

The results achieved by the railroad collective could be considerably higher if the level of operating work had corresponded to all postulated requirements. The workers of the Transcaucasian Railroad did not cope with the task on ore shipment. Moreover, the problem on shipments of fuel and ore-metallurgical raw material is very acute. Therefore, all problems related to its delivery must now be carefully considered and daily monitoring of shipments must be established without of course weakening attention to shipments of coal and construction materials.

A very crucial period is beginning in the work of the railroad -- mass shipments of agricultural products of the new harvest are approaching. As on all railroads of the system, a complex of measures directed toward timely and loss-free delivery of grain, vegetables and fruits and other agricultural goods has been worked out on the Transcaucasian Railroad. This important economic and political task must be solved with honor.

The railroad collective has done much to improve the operation of the maintenance stations. At the same time, the rail car idle times at the freight stations have been increased by almost 1 hour. If this index were fulfilled, a significant number of freight rail cars could be released for additional shipments. Special attention should be devoted to acceleration of freight operations and to unconditional fulfillment of the tasks on rail car unloading.

One of the main tasks of today is to accelerate freight rail car turnover. In this regard work directed toward better utilization of available reserves for increasing the carrying and traffic capacities of the sections and stations must be intensified and an increase of the transient nature of rail car flows, strict adherence to the train traffic schedule and an increase of the role of the traffic control apparatus in planning of train and freight operations must be achieved.

The problem of improving the current maintenance of hardware and of improving the quality of repair is acute. There are also many unutilized reserves in this regard. Unfortunately, the average daily presence of inoperable freight rail cars in depot and routine maintenance exceed the established norms somewhat. Compared to last year, uncoupling of rail cars for technical malfunctions increased.

The collectives of the track maintenance sections and the track machine stations, signalling and communications sections and energy supply sections also face serious problems. All capacities must be utilized to increase the reliability of hardware in operation and to provide stable and accident-free operation of them.

Work on preparation for summer passenger traffic has now been universally organized. The railroad collective has recently done much to improve organization of passenger traffic. This traffic should increase considerably this year, which requires intensification of efforts, especially if one takes into account the lag in fulfillment of the plan of passenger traffic turnover.

One should also talk about the fact that there are still very significant deficiencies in organization of shipments -- I would say that this is a matter of great political importance. This is primarily related to unsatisfactory fulfillment of the train traffic schedule. There are still many complaints on difficulty in acquiring tickets and in rudeness on the part of duty personnel.

The attitude toward passengers must be fundamentally changed, manifesting the maximum concern and attention about them. The Ministry of Railways of the USSR feels that improvement of the quality of passenger traffic is the most important task of all workers of the sector. The workers of the Transcaucasian Mainline may and should achieve fundamental improvement in service to the Soviet people and the guests of our country.

The most important task of the railroad collective is to constantly improve economic and financial work, to provide a further increase of labor productivity and fund return and to achieve an even greater reduction of the cost of shipments. Much is being done in this field on the Transcaucasian Railroad, but still larger scale problems must be solved. At the same time we must decisively avoid deficiencies in organization of labor and production, to which existing serious violations of work rhythm, considerable idle times and overtime work hours are still related.

I would also like to emphasize the need for universal strengthening of labor and production discipline and to increase responsibility for the entrusted matter. Losses of work time due to idle times, goofing-off and various types of leaves with authorization of the administration are still high at a number of enterprises. Calculations show that several thousand persons do not work daily due to the indicated losses of working time alone.

A number of problems related to improving the material well-being of railroad workers has been solved recently. At the same time measures to improve the wage scale are not always being fully utilized to improve operational work and organization of labor, to strengthen labor discipline and to strengthen the cadres in production. It is necessary to see that the system of material incentives is more effective and that it provide direct dependence of the size of the prize on the labor contribution of the worker and of his creative attitude toward the matter.

A considerable position in the speech was devoted to introduction of the valuable beginning of the collective of the Moscow Railroad, approved by the CPSU Central Committee, on acceleration of freight shipments by increasing the weight and length of trains. Under modern conditions, this measure is

regarded as a primary measure in the matter of increasing the carrying capacity of the railroads.

The railroad workers of the Transcaucasian Mainline warmly supported the initiative of the railroad workers of the capital mainline and formed up and conducted more than 1,500 heavyweight trains during the first quarter and transported an additional 325,000 tons of national economic goods on them. An operating staff, which has been entrusted with preparation of specific proposals to increase the weight and length of freight trains, has been created in the railroad administration. The procedure for rewarding workers engaged in formation and driving these trains has also been developed. All this is good. But at the same time there are still unutilized capacities. The average weight of a freight train during 4 months of this year, although it increased compared to the corresponding period of last year, still did not fully fulfill the established task. The norm of section speed is also not being fulfilled. Therefore, we should labor as necessary so as to be in the vanguard of those competing to accelerate freight shipments.

This year the socialist competition is being conducted under the symbol of achieving even higher positions in fulfilling the planned tasks and adopted pledges. The railroad collective is coping successfully with most of them, having considerably overfulfilled the tasks planned for this year for some indicators. This is true of the pledge to ship freight above the plan, to increase labor productivity and to reduce the cost of shipments. However, having adopted more intensive, economically justified pledges, the railroad collective would make a new significant contribution to development of the socialist competition in rail transport.

In concluding his address, comrade Pavlovskiy, in the name of the Ministry of Railways of the USSR and the Sector Trade-Union Central Committee, expressed firm confidence that the collective of the Transcaucasian Railroad, true to the glorious labor traditions, would develop the movement even more extensively to increase the efficiency and quality of work and successful fulfillment of the tasks of the 10th Five-Year Plan.

#### Rail Transport of Agricultural Products

Baku VYSHKA in Russian 18 May 79 p 1

[Article by N. Kerimbekov, chief engineer of the Azerbaijan Railroad]

[Text] The decree of the CPSU Central Committee and the USSR Council of Ministers "On measures for further specialization of agricultural production and development of viniculture and wine-making in Azerbaijan" opens a new stage in the socioeconomic development of the republic. The railroad workers should also make their contribution to achievement of the postulated goals. The freight traffic turnover of the Azerbaijan Railroad will also increase as the agriculture of the republic is developed and as the material-technical base of the kolхозes and sovkhoses is strengthened and the flow of construction goods, excavation equipment, agricultural machinery,



equipment, mineral fertilizers and other material resources will be increased especially. Introduction of new capacities, expansion and reconstruction of existing capacities and more improved forms of operating transport equipment are required to make way for freight flow. Investigations are already being carried out in all these directions. Jointly with the interested organizations, the volumes of shipments for 1980 have been refined for each nomenclature of goods. Efficient schemes of the transshipping process and measures to increase the efficiency of rolling stock utilization are now being worked out.

As noted in the decree, construction of the Yevlakh-Belokany railroad line will begin in 1981. The object has already been included in the title list for preparation of design-estimate documentation within the established deadlines. A large mechanized freight yard at Kirovabad and new tracks at Dzhul'fa Station will become operational at the end of the year and electrification of the Ali-Bayramly -- Inishly section will be completed. A significant event is startup of the centralized traffic control of the 250-kilometer Alyaty-Kumlakh route. The shipping process will be completely automated here for the first time on the railroad.

As a result, the carrying and transloading capacity of the railroad will be largely increased by the beginning of 1980. The decree gave a new impetus to further technical intensification of the lines and stations of the Azerbaijan Railroad, especially in grape production zones. Automatic interlocking and centralized traffic control are becoming operational on the Yevlakh-Agdam section. Additional tracks will be laid and switch and signal remote control devices will be installed at Kirovabad, Karadag and Kyurdamir stations. Taz, Alabashly, Shamkhor, Dollyar, Agdam, Kovlyar and Tatly stations are being equipped with electrical centralized control. The list of new construction projects and reconstructed enterprises of the entire economy of the railroad is extensive. All these transformations create favorable conditions to organize shipments by optimum variants and to accelerate freight transport.

As is known, Shemakhinskiy Rayon is now a large grape producer in Azerbaijan. In 1985 it will supply almost two times more than now.

Recruiting our internal reserves, we, jointly with the State Committee of the Republic on Viniculture and Grape-Growing, have worked out measures, implementation of which will improve the transport service of the region.

We see the further improvement of the operating work of the railroad, directed toward more complete service to agriculture in shipments, in extensive introduction of leading methods of labor and progressive technology. Thus, for example, the movement toward driving trains of increased weight and length has now received a second breath. The experience of the Moscow railroad workers, approved by the CPSU Central Committee, showed what inexhaustible reserves are hidden in mass introduction of heavyweight traffic. Quite recently, relying on the experience of the leaders, the weight of trains was increased by 700 tons on the Derbent-Baladzhary section.



Yesterday's record has become today's norm. Measures have been developed, fulfillment of which will also permit an increase of the weight norms of stock and acceleration of freight traffic on a number of other sections without special capital investments.

Many opportunities for efficient use of rolling stock have been established in closer interaction of related workers on the transport conveyor. The work of the stations and spur tracks of the clients by a unified production process, the competition of the collectives of enterprises of different agencies on the "Workers' relay-race" principle and other forms of cooperation are finding extensive distribution.

Our joint efforts based on mutual assistance with the enterprises of Goskomsel'khortechnika of the republic, permitted a reduction of rail car idle times in mineral fertilizers by 3.61 hours for unloading during January-April compared to the same period of last year. This helped to bring an additional 200 rail cars into shipment.

It is planned to ship 13 million tons of mineral fertilizers in 1981-1985 by the "Vinograd" program. The task is a serious one and requires mobilization of a large amount of rolling stock. But shipments can be carried out with fewer expenditures, which will reduce the transport expenses of agricultural enterprises.

Fertilizers are now transported in closed cars. Hard manual labor predominates in unloading them. This is the main cause of the prolonged idle times of rolling stock. And special cleaning is also required after unloading the cars before they are delivered for other goods.

Mechanized mineral fertilizer reception and storage warehouses have become operational in the republic during the past few years and many of them are being constructed. Therefore, it makes sense to transport fertilizers in hopper cars. In this case manual labor is eliminated and unloading is accelerated considerably. But to do this, the devices for mechanized loading of specialized rolling stock must be erected at the Sumgait Superphosphate Plant.

Transport of reinforced concrete supports for the grape growers is important. They are now unloaded manually from open cars and breakage of the supports is permitted in this case. It is more feasible to transport them in packets, which ensures preservation of the product and mechanization of laborious freight operations.

Special attention should be devoted to enterprises accepting or processing grape materials. Their warehouse capacities and fronts of freight operations must be increased. Thus, Baku Grape Plants Nos. 1 and 2 are limited in capacities. The railroad spur track is inadequately developed at the former and there is no track at the second plant. Only one enterprise has its own tracks in the entire southwestern part of the republic. And after all, it is here that an increase of grape production is provided. Thus,

five times more grapes will be grown in the Nakhichevanskaya ASSR than at present. One should think about allocating spur tracks by the multiple-use principle with maintenance of several regions simultaneously, for example, at Goradiz, Novogolovka, Sal'yany, Nakhichevan', Morashen and other stations.

The development of the agriculture of the republic is related to many sectors of the national economy. They all enjoy the services of the railroad. We see our task in ensuring that these services are rendered at the highest level.

#### On Unloading Rail Cars Faster

Baku VYSHKA in Russian 19 May 79 p 1

[Article by A. Mekhtiyev]

[Text] The collective of Divichi Station has been working successfully since the beginning of the year. The railroad workers are achieving acceleration in moving goods of the national economy and more efficient utilization of transloading resources. The idle time of transit rail cars has been reduced by 0.1 hour compared to the norm by dispatching heavyweight trains and carrying out technical operations on handling rolling stock within shorter deadlines.

Especially good results were achieved by the station workers in unloading construction goods arriving for the reclamation workers and for erection of a poultry plant. In cooperation with the customers, the rolling stock has been released without delays. As a result the rail car idle time for freight operations was reduced by 2 hours compared to 1978.

The best indicators in this regard were achieved by the winners of the socialist competition -- the station duty officers A. Zalov and K. Manedov and A. Dadashev, who makes up trains.

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## TRANSPORTATION

### LONG-RANGE PLANS FOR RAILROAD TRACKAGE, EQUIPMENT PROPOSED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 79 signed to press  
2 Feb 79 pp 56-65

[Article by G. Chernomordik, doctor of engineering sciences and professor:  
"Prospects for Developing Railroad Transport"; passages enclosed in slant  
lines printed in fine print]

[Text] By way of discussion.

The trend in the work of developing the USSR's transport, particularly rail transport, is determined by those most important social and economic problems that face our country in the period of developed socialism. L. I. Brezhnev emphasized at the November 1978 CPSU Central Committee Plenum that transport is a key branch, along with fuels, power and metallurgy. Railroad transport should satisfy primarily the requirements for hauling freight and passengers. In so doing it is necessary not only to handle the amount of haulage economically but also to improve haulage quality. In transport this is reflected primarily in the regularity and timeliness of delivery (the reliability of haulage) and in ensuring the preservation of freight, the safety and comfort of passengers, and, in the necessary cases, the promptness of hauling (increased speed in delivery by a specific deadline).

In order to visualize the picture of railroad transport development, it is necessary to foresee, albeit arbitrarily, the scale and nature of its operation in the long term. Forecasts here should be extremely cautious, since transport work is closely connected with the development of the economy of the whole country and with many other social and economic factors. But still, certain trends can be noted even now.

As is known, haulage volume for all types of transport is still increasing extremely intensively, but later on, particularly through the development of other forms of transport, the pace of growth in haulage volume on the railroads will be slowed. However, the absolute magnitude of freight and passenger turnover on the railroads will be extremely great.

The structure of freight hauling also is being changed. This is caused primarily by the "refinement" of the products intended for hauling (timber, ore and so on) and by energy shifts, with a substantial increase in the share

of atomic and also, later, of thermonuclear power, which will reduce relatively the transportation of coal and crude oil; the introduction of lightweight materials--polymers, for example--to replace metal and concrete is being expanded; many machines and instruments are being miniaturized; and so on. All this will help to reduce relatively the tonnage hauled, with a certain simultaneous growth in average hauling distance. The latter circumstance is brought about by the need to ship ever-increasing amounts of products from the eastern regions of the country to the European part, and also by the high effectiveness of specialization and cooperation in production, which is extremely advantageous where there is inexpensive large-scale transport. The freight that is hauled, as a consequence of change in its structure, will require a larger number of cars for the same weight. Therefore, it should be expected that the tonnage of freight shipments will grow at a slower pace than at present, but, at the same time, the growth of freight turnover in ton-kilometers, and especially in car-kilometers, will, as a rule, outstrip the growth of products in terms of weight.

Changes will also occur in passenger traffic because of the fact that in the future the pace of growth in mobility of the populace will be slowed (not counting suburban traffic, which for many years more will develop rapidly, considering the widespread settling of inhabitants around the large cities), but, when it has achieved the level that has been set for the much longer term, mobility in general will be more or less stabilized, since trips will be connected to a great extent with the availability of free time, which, naturally, is not unlimited.

Aside from satisfaction of the requirements for haulage volume, the ever-increasing requirements for speed in shipping freight and passengers should be met. Transport will be required to make extremely rapid delivery of perishable, scarce and valuable freight, as well as of passengers engaged in urgent business, and also, at the same time, relatively slower but regular large-scale delivery of nonscarce freight, of freight that is proceeding to warehouses for long-term storage, and so on. Certain tourist trips for people also do not require rapidity, and the speed in moving other passengers should be determined mainly as a function of the effectiveness of the time saved by people during travel.

In order to provide for regularity of haulage, transport must have first of all adequate reserves of throughput of the lines and the railroad yards, and also a better servicing activity that will ensure reliable transport operation. For punctual haulage, moreover, more powerful transport equipment and increased throughput will be required.

Aside from the requirements for speed in delivering freight and passengers, the holding capacity of transport units will simultaneously be more sharply differentiated. For freight traffic this will mean primarily the probability of handling both heavy and relatively light trains (using containers for small shipments) and for passengers--trains of different capacities.

A very important aspect of transport activity is its fulfillment of the population's social requirements (in the area of trade, medical service, haulage of schoolchildren, service to tourists, and so on). Automotive transport mainly undertakes these functions, but the railroads' role here also remains substantial.

In addition, it is desirable even now to improve decisively the system for comprehensive servicing of the transport clientele for freight and passenger traffic, both prior to the start and at the conclusion of hauling (the reserving of passenger seats, the delivery of tickets, arrangements for hotels, forwarding service for freight hauling, and so on) and to promote transport departments in industry, primarily with a view to cutting idle car time during loading and unloading.

These are certain basic features of the work of USSR railroad transport, which, over the long term, will remain a leading type of transport. Insuring its effectiveness requires primarily a rise in the throughput and carrying capacity of the railroad network and in provisions for reliable and economical functioning of all its elements.

Under the existing distribution of productive forces in the country it is necessary to strive for a maximum reduction in the amounts of freight hauled. For this purpose, work should be done continuously on rational hauling, particularly on the elimination of excessive long-distance hauling and unjustified counterhauling by assigning customers correctly to suppliers. Simultaneously, railroad transport should exert an influence also on the siting of future production facilities and, in some cases, on the shifting of existing facilities.

All the potential now exists for solving this sort of task on electronic computers, with transport organizations submitting to the corresponding agencies the tariffs developed by IKTP [Institute of Integrated Transportation Problems] for computing hauling costs. These rates should be revised regularly because of changes in prices. All ministries and agencies that are working on the transfer of production facilities should use them.

On some railroad routes there is a steady stream of empties. In most cases this is observed on lines on which coal, ore or other large-scale freight is hauled. In the return directions, the expenditures for hauling are usually extremely small, since the cars proceed empty, and it is desirable to load them. It is here, where rolling stock can be used on the associated route, that it is desirable to place production facilities. Organizations that are transferring productive forces should be widely informed about such routes; this measure should be carried out immediately.

It is just as important to solve the problem of the extent to which it is desirable to "refine" a product prior to hauling it. A comparison of expenditures, on the one hand, for industrial production, and, on the other, for the operation and development of transport, will enable determination of the desirable scale of rationalization of haulage through appropriate modernization of the production of products. This research must be



conducted not only by transport organizations but primarily by the branches of industry with the involvement of transportation workers.

/Among other important problems that directly connect railroad transport operations with the interests of the national economy, the question of the system of distributing output should be singled out. Where adequate reserves for transport have been created (and only where continuous and regular operations are provided for) it may be possible to decrease sharply the reserves of freight in storage./

The railroads will henceforth be the basic type of transport for large-scale freight, despite the fact that all the base oil and a large part of petroleum product should travel by pipelines. For long-distance passenger traffic the basic modes of travel remain the railroads and aviation, and, for local and suburban traffic, the railroads and automotive and local air transport. But at the same time important shifts in the distribution of haulage can occur. Intercity truck transport "from door to door," primarily for hauling perishables and valuable and scarce freight, should be developed substantially. A part of such freight can be transported with adequate effectiveness by air transport, where the additional expense for hauling under these circumstances is justified by rapid delivery. Short hauls should in many cases be taken off the railroads; and some free-flowing types of freight can be sent by pipeline.

The sphere of distribution of passenger hauling should be more accurately delineated. Long-distance railroad transport (when average speeds on the railroads are raised to 100-120 km/hr) will be used preferentially on those routes where the trip can be accomplished in one night plus a few hours in a sleeping car, that is, for distances of up to 1,500-1,600 km. For trips over much greater distances, the bulk of the passengers should use air transport.

A substantial portion of local and suburban hauling should be accomplished by bus. It must be kept in mind, however, that suburban transport around large cities can be assimilated practically only by trains that should not mandatorily move on the traditional railroad tracks, for in some cases (where the traffic flow is large) they can be sent on high-speed trestles above the ground.

Everything that has been mentioned about changes in distributing haulage among the types of transport will lead in the future to some reduction in the load on the railroads.

In transport, as has been indicated, a differentiated approach to travel speed is necessary. There should be two basic freight speeds on the railroads--ordinary and high-speed (for hauling valuable, perishable and scarce freight).

/IKTP estimates indicate that it is desirable to bring the average running speed of ordinary freight trains up to about 60-65 km/hr for diesel traction and to 65-70 km/hr for electrical. Average speed for high-speed

freight trains should be 20-25 km higher. In passenger traffic also it is desirable to have two speeds: ordinary and high-speed. If the average speed of high-speed freight trains is equal to the speed of ordinary passenger trains, then in the long term there should be three speeds on the railroads: ordinary freight, fast freight and the ordinary passenger speed that equals it, and high-speed passenger. It is desirable to organize high-speed passenger-train traffic on some passenger lines, which are few (Moscow-Leningrad, Moscow-Gor'kiy, Moscow-Khar'kov and certain others)./

Fast-freight traffic must be organized and passenger-traffic speeds must be raised in the near future, considering the national economy's need for these measures. However, on double-track lines the lack of throughput reserves prevents this. Here recourse must be had to an approximation of the speeds of ordinary freights and fast freight and passenger trains. In such cases it is necessary to proceed not so much along the path of reducing the speeds of passenger trains and fast freights as that of increasing the speed of ordinary freight trains, mainly by using more powerful locomotives on them. On single-track lines it is necessary to strive for a maximum possible increase in the speeds of fast-freight and passenger trains, since in these cases the greater the gap between the speeds of the faster and the slower trains, the higher the throughput of the freight trains. It is necessary to take advantage quickly of the indicated peculiarity in organizing train traffic with different speeds on single-track lines, since this will raise the running speed in the required direction and increase throughput reserves.

In considering the nature of haulage, specialized lines should be singled out later on for "heavy" freight traffic and high train weight. The requirement for this arises now because of the need to ship large amounts of coal from Siberia to the Urals and the European parts of the country. With a restriction of passenger and fast freight traffic on such lines, it will be possible after certain technical improvements to haul up to 200-250 million tons of freight per year. At the same time, a number of lines, particularly the South Kursk route, can be specialized for passenger and fast-freight traffic (with approximately the same speeds). The question of the specialization of lines should be a topic of special examination.

An important problem is an improvement in railroad yard work, principally raising the reclassification capability of the yards, in coordination with route work. It is desirable to use block train methods more widely in the future and to greatly increase the number of destinations of the trains, especially those with valuable freight, dispatching them in the necessary cases with relatively low weight. For this purpose, however, it is required that the number of classification, receiving and dispatching tracks at the yards be increased. Simultaneously, the amount of car reclassification is reduced, which facilitates the yards' operation.

Progress in the equipment and technology of railroad operations is of great significance in developing transport. The railroads are to move trains of different weights and speeds, on the various sections of lines

that are not specialized in "heavy" or "light" freight or passenger traffic (they are in the overwhelming majority), full-length trains (making use of the full length of the yard's tracks) with a weight of about 1,200-1,500 tons (empties) to 5,000-7,000 tons or more (trains loaded with coal, ore and so on) will be handled simultaneously. In this case the weight of the trains can be different within the indicated limits.

It is obvious that, in order to make best use of technical equipment and to provide for trains of the indicated category, a single prescribed rational level of speed should be specified and the specific locomotive power per unit of train weight should be about equal. And this means that the locomotive power for various train weights should also be different, which is provided for by introducing sectional locomotives that operate under the multiple-unit system.

/Research conducted by IKTP has established that it is most desirable to manufacture electric and diesel locomotive sections for ordinary freight traffic that have four and six axles, from which it is possible to obtain any combination of locomotive powers in two-axle increments. Locomotives with high capacity per unit also find application for passenger and high-speed freights. With the solution of this problem, as in any new matter, technical and operating difficulties arise, which, however, in our view, are easily overcome. It should be noted that we have now created locomotives made up of two sections, but they are not adapted for operation under the multiple-unit system, since the separate sections do not have second cabs and cannot be used independently./

There remains the urgent question about replacing diesel with electrical traction, mainly because of the need for a maximum saving of diesel fuel, as is the case also for crude oil and petroleum product in general, which will be used for other purposes in the national economy. It is necessary, therefore, to work on the creation of a diesel-and-overhead-line locomotive or a battery switch engine to replace diesel locomotives for switching work. In train work, as before, electric locomotives should replace diesels, as a rule, on double-track lines, and, in some cases, simultaneously with the construction of second track, considering that the amount of traffic for which the second track will be built is increasing rapidly and is approaching the limits of economic suitability for the replacement of diesel by electric locomotives.

Another important problem is the creation of a car on roller bearings with maximum possible linear load and widened clearance (the T clearance) that is reliable in operation. Since, apparently, T clearance cars can be used only on lines where sufficient space between the rails has been provided at railroad yards, they should be introduced primarily on closed routes, where this condition is provided for.

Specialized cars for hauling various types of freight must also be introduced more widely, although the relationship between universalization and specialization of the car fleet requires continuous analysis, since it is to a great extent a function of the changing structure of haulage./

/While for large-scale freight it is desirable to increase the load capacity and linear loading of cars to the maximum, containers should be used widely for hauling small shipments. This will be principally mixed hauling (accomplished to the maximum extent with the involvement of automotive transport). Therefore, the problem mentioned lies far beyond the limits of rail transport and is not examined in this article./

An important question in developing railroad transport is the creation of a blocking system that will insure safety of train traffic with short intervals. This is especially important for double-track lines, where the possible reserves for increasing carrying capacity consist mainly in reducing the space between trains. The improvement and introduction of a system for the continuous automatic regulation and for the automatic stops that will enable train traffic without speed restrictions and that will automatically watch for the train that is ahead and is separated only by the braking-distance length (plus a certain reserve of time and distance for activating the braking system) should be worked on.

/In the area of improving technical equipment, one must not bypass questions that were studied recently about increasing the strength and wear-resistance of the rails and the related potential of some increase in the loading on car axles. With the huge load placed on the track and the necessity for a constant buildup of carrying capacity, the indicated question should be solved as quickly as possible./

The operation, upkeep and repair of transport's technical means for transport--the track, rolling stock, signalization, centralization and blocking system (STsB) installations, energy supply and others--occupy a special place in the operation and development of transport. Questions of the reliability of railroad operations are acquiring increasing urgency. Where there are substantial amounts of traffic, disorders in the work of the various elements of railroad activity threaten such serious trains delays that the elimination [sic] of traffic interruptions can not only induce large losses to the economy but, within certain limits, the workload will prove to be practically impossible and will lead temporarily to a full traffic stoppage. Therefore, those systems of preventive maintenance and repair of rolling stock, track and STsB, and energy-supply facilities that will reduce breakdowns to a minimum should be developed primarily for lines that are especially overburdened. The repair base for rolling stock should be sharply reinforced, using the replacement of whole components, strict observance of the prescribed amortization periods for replacing assemblies, and organization of the required preventive maintenance measures.

In this connection, technical and economic research must be conducted in order to determine the desirability of measures for increasing the reliability of each element of transport activity. This will require corresponding, sometimes large, capital investment expenditures, but, with the heavy load on the lines, an increase in reliability (a reduction of breakdowns) will give such a substantial benefit in reducing delays of trains, cars, locomotives, freight and passengers that these expenditures can



prove to be extremely effective. For this purpose, it is necessary first of all, based upon statistical data, to identify the losses associated with breakdowns in the operation of the various elements as a function of the amounts of traffic, to plan measures for reducing or eliminating delays by introducing more improved equipment or technology, and to determine the benefit from the reduction of delays and compare it with the expenditures required for this purpose. Scientific organizations should undertake such studies immediately.

The buildup of the railroad network has been occasioned by both the need to provide for the increasing volume of haulage and by the tasks of increasing the quality of haulage. All this requires the construction of new lines and of second, third and fourth track and a corresponding development of the railroad yards. As before, one of the main areas for developing the network will be a concentration of traffic on mainlines (chiefly the wide ones). In the long term, several tens of thousands of additional mainline track and new railroads should be built, including a number of new lines that will relieve the load on double-track routes that are overloaded. Such lines should be built as double track or double-track insertions, since, under normal conditions, traffic is not diverted to single-track lines because of the great operating costs for haulage.

/As for the dates for executing long-range amounts of new construction, the following circumstances should be borne in mind that make it necessary to use the existing network more intensively. As IKTP research has indicated, the cost of the construction of second track and of new lines (not including the BAM [Baykal-Amur Trunk Line] and a number of lines that are being built under difficult conditions in the country's north and east) over the last 20-25 years has grown by two to three times in comparison with the cost of rolling stock and the price of other products of the national economy. This is explained by many factors. Chief among them, in our view, are: the necessity for material incentives to recruit workers for railroad construction; extraordinarily rigid specifications for designing railroads that are not justified by the nature of the operations; the great density of traffic under which second track is built; and so on. Aside from the economic considerations, the necessity for more intensive use of existing single-track and double-track railroads is occasioned by the shortage of construction personnel./

Priority measures in railroad transport that will enable the carrying capacity of the railroads to be increased are a rise in train weight, primarily through the wide introduction of cars with increased linear loading, and more complete use of the existing lengths of yard track (considering that an extension thereof on the main routes has practically been completed). Conversion to a higher standard of length for yard track is, as a rule, undesirable (except for various specialized lines), since it requires enormous capital investment and can violate normal operation of the network.

On single-track lines it is necessary to raise the speed of passenger trains and to use packet-schedule traffic with automatic blocking; in



certain cases a shortening of restrictive stretches of track through the construction of additional sidings can be called for. These measures can raise the throughput of single-track lines under average conditions by up to 25 million tons per year on one route and even more.

The computed interval between trains can be reduced by 6-7 minutes on double-track lines where there is a simultaneous rise in the operating reliability of rolling stock, track and other technical resources, which was mentioned above, and where there is improvement in blocking systems and in the conditions for entrance to the railroad yard and exit therefrom of associated trains. As a result, the limits on use of double-track lines can be expanded where greater reliability in their operation is provided for. However, the hauling capacity of double-track lines, even where more reliable operating conditions have been provided for them, is not limitless, and all the same, the necessity arises (on certain routes this question has already been posed) of reinforcing double-track lines by the construction of third and fourth track or of relief lines. There has been no such necessity either in the USSR or abroad (although there are four-track and even six-track segments), and so the question of which is more desirable--to build third or fourth track or new relief lines--has not been studied.

At first glance the answer seems clear: preference ordinarily has been given to new lines, which will carry out, apart from purely transport tasks for haulage, the functions of servicing the economy and the population of the region. However, in fact, everything does not turn out to be so simple. First of all, when the distance between parallel railroads is less than 200-300 km, the new lines will not yield an economic benefit, since supply for the existing route can in these cases be accomplished sufficiently well by automotive transport. Therefore, where the railroad network is dense, such, as for, example, in the European part of the USSR, the construction of new double-track relief lines is in most cases hardly desirable. It is nevertheless correct that, where there are third and fourth tracks, a substantially smaller staff is required, since, for servicing the overtaking points, tracks, energy-supply installations and STsB, only a certain augmentation of existing cadres is required, while, in the case of new lines a staff must be created anew. Moreover (and this evidently will be of decisive significance), third and fourth track can be built by stages, while new lines would have to be built all at once with double-track inserts or as continuous double track.

/This does not mean that in all cases the construction of new relief lines is undesirable. Where the network is sparse, or for certain other reasons, particularly if it is difficult to use existing adjoining junctions, it is probably necessary to build third and fourth track. However, it must always be kept in mind that the given question requires thorough study, the more so since this problem still has not been developed scientifically./

Still another circumstance should be examined. With the construction only of a third-track variant, the following organization of traffic that was proposed jointly by Doctor of Engineering Sciences B. S. Kozin and me back

in 1960 can be used: on the third track, paradoxical as it may seem, passenger and fast-freight traffic will be sustained. For this purpose, sidings for meeting trains are constructed on it, ordinarily at the sites of existing overtaking points. The average traveling speed of passenger trains and fast freights is increased, with the estimate that the service speeds (taking into account stopping for meetings) would be about the same as on double-track lines. Then, an enormous carrying capacity can be realized on the existing two tracks, since the weight and length of the train can be greatly increased, thanks to an absence of overtaking trains, for the freight trains can follow at short intervals.

/The indicated variant in the use of a third track should be carefully worked out with a view to determining the possibility for its realization and to clarify its effectiveness. Considering the fact that, during the first stage, where there are comparatively small amounts of passenger traffic, it will be possible in certain cases to erect only a portion of the third track (for overtaking), the variant of building third or even fourth track acquires still greater advantages in a comparison with new lines./

As for the railroad yards, first of all a master schedule should be established definitively for the development of classification yards and for the scale of development of their track, based upon the propositions that the dispatching of block trains must be increasingly expanded, and that, for through trains that are formed at classification yards, the number of destinations for trains must be increased. This will require reinforcement of the yards' track development, but it will facilitate the yards' operation by virtue of a reduction in the total volume of reclassification of car strings. Such a trend issues also from the circumstance that the average price for the freight being hauled is rising continuously, and this increases the desirability of block trains, especially with valuable freight, without a protracted buildup.

At present, passenger traffic, which is an important sphere of service for the population, is not at its due height, for a number of reasons (many of which are objective). First of all, running speeds for both long-distance and suburban trains not only have not been increased in recent years, as is known, but in some cases they have even dropped. The harm thereby caused both to the national economy and to the populace outwardly is inconspicuous but it is very great. Over long distances, an increase in train time leads to nonproductive loss of time and a reduction in rest and to other consequences connected with staying aboard the means of transport. In suburban traffic the transport fatigue of the passengers is increased, and this is reflected in the productivity of their work; an increase in train time into the city also leads to a reduction in the potential for acquiring manpower from suburban zones.

Therefore, all measures should be taken to eliminate the indicated negative phenomenon as quickly as possible. Meanwhile, the Ministry of Railways is not doing much that would enable passenger-traffic speeds to be raised. These speeds can and must be raised without harm to throughput on

practically all suburban segments, where passenger traffic is usually isolated from freight traffic, and also on all single-track lines where, as was said above, with an acceleration in passenger-train traffic, the removal of freight traffic is reduced, and, consequently, throughput reserves are raised. On double-track lines, as also was said above, it is desirable, with a view to reducing the removal, not so much to reduce the speed of passenger trains as to raise the speed of freights. Calculations indicate that, where adequate throughput reserves are created, average passenger train speeds should grow in the future by about 1.5 times over those now achieved. High-speed passenger traffic (with speeds of 200-250 km/hr) should be executed mainly in the daytime for a period of no more than 4-6 hours and where there is sufficiently great passenger traffic.

The creation of special high-speed railroads, particularly to the southern health resorts, as is being proposed by several organizations, is not desirable where air transport is available. It would be rational only where traffic is of such volume that it will not occur even in the long term. However, as has been indicated, night movement can be organized on existing lines without great expense, particularly from Moscow to the Crimea (and later also to other cities that are located no more than 1,500-1,600 km from the capital).

In this short journal article, naturally, only the problems that are, in our view, most important have been covered.

If what has been said is summed up and the main points singled out, it can be concluded that in the future the main tasks for developing rail transport will be, as they are now, a rise in the throughput and carrying capacity of the lines and in the reclassification capabilities of railroad yards, which will enable freight and passenger haulage to be assimilated and the quality and economy of haulage to be raised. However, the means by which they should be raised should be changed: aside from the generally adopted measures for constructing additional mainline, the electrification of double-track lines, the construction of relief lines, the introduction of automatic blocking, and so on, a substantial share of the resources allocated should be devoted to more intensive use of the existing network and equipment, with a mandatory increase in the reliability of operation of the railroads as a whole and of their separate elements. This, along with the adoption of organizational measures and an increase in discipline, will enable the difficulties that exist on our railroads to be coped with.

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